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ABSTRACT

Papers designed to help build multidisciplinary training networks for rural development are collected in this document, an outgrowth of a regional training workshop attended by participants from Bangladesh, Nepal, Pakistan, Philippines, Republic of Korea, Thailand, and India. The six papers deal with the objectives of the workshop which were to: (1) review the functioning of multidisciplinary educational teams engaged in projects related to rural development; (2) review the existing training programs and identify the training and retraining needs of multidisciplinary educational teams; (3) identify innovative strategies and content of training for officials engaged in rural development projects; (4) develop alternative feasible strategies and programs for training of multidisciplinary teams for rural development; and (5) explore feasible mechanisms and programs for promoting networking of projects and institutions in operational program, training and professional support services, to improve their joint capabilities in undertaking preservice and inservice education programs. One paper reports on participants' 2-day field study visit to three rural development projects in India that were engaged in activities such as water and resource development, soil analysis, low cost construction of buildings, adult education for women with emphasis on science and technology, and teacher training. (JHZ)

Building Multidisciplinary Training Networks for Rural Development

APEID Regional Workshop for Pre-service and In-service Training of Members of Multidisciplinary Educational Teams in Rural Areas, Pune, India, 16-26 July 1985.

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Building Multidisciplinary Training Networks for Rural Development

Report of the Regional Workshop for Pre-service and In-service Training of Members of Multidisciplinary Educational Teams in Rural Areas

PUNE, INDIA, 16 - 26 July 1985

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PREFACE

In pursuance of Resolution No. 2.1 adopted by the General Conference of Unesco at its 22nd Session, the Unesco Regional Office for Education in Asia and the Pacific (ROEAP) convened, in co-operation with the Indian Institute of Education, Pune, (an Associated Centre of APEID), a Regional Workshop for Pre service and In-service Training of Members of Multidisciplinary Educational Teams in Rural Areas, from 16 to 26 July, 1985.

One participant each from Bangladesh, Nepal, Pakistan, Philippines, Republic of Korea, Thailand and four participants from India attended the Workshop. In addition, two resource persons – one from Australia and the other from India – also participated in the Workshop.

The objectives of the workshop were to:

i) review the functioning of multidisciplinary educational teams engaged in projects related to rural development;

ii) review the existing training programmes and identify the training and retraining needs of multidisciplinary educational teams;

iii) identify innovative strategies and content of training for officials engaged in rural development projects;

iv) develop alternative feasible strategies and programs for training of multidisciplinary teams for rural development; and

v) explore feasible mechanisms and programmes for promoting networking of projects and institutions in operational programme, training and professional support services, to improve their joint capabilities in undertaking pre-service and in-service education programmes.

Discussion papers were prepared by the participants for presentation at the Workshop. These provided information, analyses and insights which lent substance to the discussions and brought out salient features of the major theme, thus leading to clarification of concepts and consolidation of the processes of training multidisciplinary teams and of networking.

In the first plenary session the agenda (Annex 1) was formally adopted and the following officers were elected :

Chairperson	: Dr. Chitra Naik (India)
Vice-Chairman	: Prof. Javaid Iqbal Syed (Pakistan)
Rapporteurs	: Mr. Robert Macadam (Australia)
	Dr. A.V. Gadgil (India)

Dr. H.K. Paik (ACEID) acted as Secretary of the Workshop.

The participants visited and critically observed two education and rural development programme of the Indian Institute of Education, Vidnyan Ashram (Science Hermitage) at Pabal village (Sirur Tehsil, Pune District) and two villages in Haveli Tehsil, Kondhanpur and Rahatavde. Rabal is 80 km from Pune and the other two villages about 40 km. Examples of the training of multidisciplinary teams and networking seen at these places were analysed by the participants. The participants also visited the Kasturba Gandhi Training Centre for women rural workers in Pune.

The group being small, participants worked together in discussion sessions and undertook personal assignments for developing notes and chapters on the ideas which emerged from the discussions. This procedure facilitated the preparation of the final report. The documents produced will help build multidisciplinary training networks for rural development.

CONTENTS

Chapter One

TRAINING OF MULTI-DISCIPLINARY TEAMS FOR RURAL DEVELOPMENT: OVERVIEW

All development agencies have their own programmes of training rural development workers. Agricultural departments train agriculture extension workers, health departments train community health workers, the departments of social welfare train social education workers and departments of education prepare teachers for rural development. Universities have training programmes for developing leadership for rural development. It is realized that these agencies train their functionaries to bring about change in understanding, attitude and practice in their respective fields. Training the change agents is an essential component of the development agencies training programmes. Their training involves a strong education component. It is this education component in all the multidisciplinary training programmes that provides the setting for training teams to work together to promote integrated rural development. The country reports have highlighted that (a) the need for a co-ordinated approach in training multi-disciplinary educational teams has been accepted as a necessary ingredient in the programme of education for rural development; (b) some of the countries have developed and implemented innovative modalities of training multidisciplinary educational teams, (c) other countries have been successful in building networks of training facilities; and lastly (d) there are inter-country and intra-country differences in trying out new modalities and in building needed networks for sharing expertise and resources. The country reports have further pointed to the need for renewed efforts to identify education components in the training programmes of developing agencies. The reports also point to the need for the education departments to define their role in the preparation of the functionaries of other development agencies working for rural development. A very heartening feature of the reports is the place which the agencies of formal and non-formal education occupy in the programme of education for rural development and the recognition of their role by the rural community and the developing agencies. The recognition of this role of education – formal and non-formal – is beneficial to the education system on the one hand and the training programmes of development agencies on the other. This mutual advantage augurs well for laying a firm base for building networks of expertise, facilities and resources for rural development.

The country reports clearly show that all agencies in the field of rural development, including education, having been aware of the advantage of networking, are trying out various modalities for building networks to facilitate training of multidisciplinary educational teams for rural development. The country reports further show that networking has been successfully tried out in certain countries whereas it has yet to take a demonstrable shape in other countries. A micro-analysis

of the contents of the country reports indicate that the various dimensions of the problem of networking for training for rural development are: (a) the role of alternative educational systems in promoting networking of expertise, facilities and resources; (b) innovative techniques for developing training programmes and training materials; (c) innovative modalities of delivery of training/learning packages; (d) innovative approaches in building networks; (e) the role of action research in building effective networks; and (f) the emerging role of the teacher in developing a successful and effective strategy for developing training materials and building networks at local as well as national levels. The highlights of country reports under each of the above dimensions are summarised below:

Role of alternative educational systems. The most tried-out alternative to the formal education system is the non-formal education system. The country reports reveal that the unreformed formal education is losing its credibility to foster rural development. At least, some of the educational thinkers propound this view. In the region there is a second viewpoint gathering ground, that it is possible to improve the existing formal educational system so that it can play a decisive role in the work of harnessing educational resources to national/rural development. Both the schools of thought, however, agree that along with efforts to improve formal education, the alternative system of non-formal education should be fully used for training of multi-disciplinary teams for education for rural development. In India, the National Council of Teacher Education has developed a new teacher education programme where a considerable weightage has been given to productive work and work with the community. This is an attempt to harness formal education to rural development. A better picture of the multi-disciplinary approach for rural development has been successfully tried out in the non-formal sector of education. The Institute of Education, Pune, is an university affiliated research institute. It is spearheading rural development programmes using non-formal education programmes. It has been successful in developing a training model using multi-disciplinary teams, in developing learning materials with a multi-disciplinary content and in successfully implementing the training model and the learning material. What is important is that the model is replicable and is being used elsewhere. In the formal set up, there are instances of networking and the multi-disciplinary approach but they are still at the tryout stage.

A second outstanding example of using the non-formal educational system for training rural development functionaries is the programme of Saemaul Undong in the Republic of Korea. Saemaul training – or more generally Saemaul education – has been an innovative non-formal educational method which has trained all levels of people from the grass roots to the top, to fully, participate in programmes of community development. In the 1970's and 1980's, the Saemaul Undong laid new foundations on its voluntary base by emphasizing its training function, which is essentially of a multi-disciplinary nature. Non-formal education has been the basis of all successful Saemaul activities.

Nepal presents another example of voluntary organizations providing non-formal training and education for rural development. The Mother's Club, Nepal Women's Organization and the Nepal Youth Organization, are examples of voluntary

organizations providing non-formal educational programmes leading to rural development.

The Philippines utilizes non-formal education programmes for rural development. The training programmes use multi-disciplinary teams. The Self Reliant Home Movement (SRHM) aims to develop self reliant households and communities. The non-formal approach to train village leaders for SRHM has resulted in a strategy for multi-disciplinary involvement of various sectors based on real life situations with a thorough study of the community, its environment and its peoples' needs, values and priorities as a starting point. The planned use of non-formal education programmes to build multi-displinary educational teams for rural development has resulted in an increasing use of action research as an innovative modality for building training teams for rural development.

Innovative techniques. The country reports have given detailed descriptions of the training programmes and training modalities. There are variations both in programmes and methods. Both are country specific within the Region. Within a country, the training programme is discipline specific but not so the training method. A close study of training programmes and methods reveals that the training programmes in the various countries focus on the specific content relevant to the development agency. For example, while the training programmes of the department of health and the department of agriculture differ in content, both programmes aim at developing the change process. This is a core content in various training programmes cutting across the various departments and different countries.

Apart from the content of training programmes, which is rich and relevant, a heartening feature is the fact that all countries realize that an effective training modality has always to be non-directive in approach. Practically in all the countries, lectures are being replaced by group discussions, group work or self study. Another feature is the place of practical work as a training modality. In all the countries, the uni-disciplinary approach to training is being increasingly replaced by a multi-disciplinary team approach. This is seen in the training programmes planned by the Indian Institute of Education, Pune, National Institute of Rural Development, Hyderabad (India), the training programmes for the community leaders planned by the Saemaul Undong movement of the Republic of Korea, the training programmes of the Bangladesh Academy of Rural Development and the training programmes of the consortium of teachers colleges in northeastern Thailand. The innovative training modalities are characterized by non-directive participatory learning with an emphasis on self learning. The training teams are multi-disciplinary in composition or there is an inter-disciplinary approach to training. The training courses have a multi-disciplinary content. The training of rural educational functionaries with the use of multi-disciplinary educational teams has strengthened the teacher education programmes as is evident from the programmes of extension education in the teachers' colleges of Thailand or the new syllabus of teacher education in India or the involvement of teachers under training in Nepal. These new modalities have a clear demonstrable impact on the competencies of rural development functionaries and the rural development programmes.

Innovative modality of the delivery systems of training materials. From a close overview of the country reports, there emerges a picture of non-traditional modalities being used in the training of rural development functionaries. These modalities are characterized by an intelligent use of educational technology including the technique of distance education. The use of educational technology is seen in the development of training/learning packages in the forms of audio-cassettes, video-cassettes, self learning modular learning units, materials promoting group work, materials promoting local surveys and using the primary sources of information. This innovative modality is used in Bangladesh by the Bangladesh Institute of Distance Education which trains teachers in home-economics, practical arts and gardening. These teachers act as powerful catalysts in all programmes of education for rural development. In India, Satellite Instructional Television was used for preparing teachers of science who would join the teams of rural development functionaries. A number of training institutions, run on the Gandhian philosophy, combine training with productive work and community services. In Nepal, the university used its student body to deliver the message of rural development in far off villages. In Pakistan, Allama Iqibal Open University (AIOU) employs a distance teaching methodology by centrally developing learning packages primarily consisting of cassettes and flip charts in the light of needs assessment surveys using multi-disciplinary expertise. The course material so developed is delivered to far off villages through the use of distance learning techniques. The nation building departments are involved not only in the development of learning packages but also in the out-reach system. Field Operational Seminar has been successfully used in the Philippines for the training of multi-disciplinary educational teams. The Republic of Korea has successfully used success stories of the work of farmers and other village workers. The most often used method is basically that of learning by doing supplemented by a problem solving approach. The modality used for reaching the rural population in Thailand is a planned co-ordinated use of the expertise available in the various faculties of universities, pooling of their resources, involving the community leaders and linking programmes of rural development with the training of teachers. All innovative modalities are found to have been in use in the programme of preparing multi-disciplinary educational teams for rural development. These modalities have local cultural tradition in their content and modern scientific products in their form. An imaginative combination of national content and modern scientific form characterises the training modalities in the region.

Innovative approaches in building networks. The country reports have given a fair description of the efforts of networking of expertise, facilities and resources in various projects. Networking is a new concept and there is a wide variation in successful efforts at building effective networks. In Bangladesh, networks have been built up effectively by the Bangladesh Academy of Rural Development (BARD). The main reason for successfully building the network is the national status enjoyed by BARD. It has been able to build up multi-disciplinary teams and a network of resources with the help and active involvement of Thana Education Officers. Networking in Bangladesh, has helped to bring primary schools closer to the development agencies. In India, networking has been successful more at the non-formal level than at the formal education level. The main reason for

this is the flexibility in approach found in non-formal education programmes and the decision making by persons at the grass roots level. Many times networking is facilitated when decisions are taken at the highest level and the same are communicated at the lower level without the messages getting distorted. In Nepal, the analysis of the country report points to the case with which the District Education Office can successfully build up a network of expertise and resources for organizing multi-disciplinary training of education teams for rural development. In Pakistan, rural development programmes are planned and implemented by governmental, autonomous and private organizations.

All joint projects of a collaborative nature help in pooling resources and in building horizontal as well as vertical linkages so essential for effective networking. The Allama Iqbal Open University with its distance teaching methodology serves as a neutral base for co-ordinating the work of the nation building departments. Through building networks of expertise drawn from nation building departments, course materials and training/learning materials are developed. The university follows the 'train the trainers' approach. The effective networking is made possible because of its prestigious position among the educational institutions in the country. In the Philippines, the procedure for building effective networks involves surveys of institutions and agencies, their resources, the available expertise on the one hand and, on the other hand, surveys of needs of training personnel and finally matching of needs and resources. Effective networking is made possible because of the data base built up through surveys.

There is a procedure of establishing working relationships among different institutions and organizations which makes the networking process smooth and easy. In the Republic of Korea, teachers form multi-disciplinary education teams for rural development. Teachers from various disciplines teach farmers and rural housewives together with researchers at colleges of agriculture and agricultural research institutes. Two main research institutions – one controlled by the Ministry of Education and the second controlled by the Ministry of Agriculture and Fishery – are engaged in programmes of rural development. There are strong horizontal linkages between these and other rural development agencies. Because of these linkages, networking is made feasible and possible. The Saemaul Undong movement provides numerous instances of networks because of its multi-disciplinary composition and programmes. In Thailand, measures taken by the Government have facilitated the building of networks for rural development. The Department of Teacher Education supervises the programme of 36 teachers' colleges under its jurisdiction. These colleges are divided into eight clusters. Each cluster, in co-operation with the university and other colleges in the area, organizes extension education programmes for the community. The Department of Teacher Education acts as a co-ordinator between teachers colleges and other national agencies, particularly the ones under the Ministry of Education. The network of educational institutions makes it possible for sharing facilities, expertise and resources needed for the programme of extension education for the community. These networks in each cluster of training colleges have stood the test of time and have thrown out adequate data to theorise the building of multi-disciplinary training teams for rural development.

Role of action research in building effective networks. The Asian-Pacific regional experience in developing multi-disciplinary educational teams and networking of resources has thrown out 'action research' as a promising and effective modality for rural development. This approach is being tried out with varying degrees of success in different countries. Action research combines within it a programme, a modality and a technique – all in one. The Hawkesbury Agricultural College in Australia has an innovative strategy and a set of training programmes which, when implemented, reveals all the characteristics of an action research project. The report from Bangladesh shows that action research is used as one of the methods of training the functionaries of the development agencies. In India, multi-disciplinary educational teams for rural development have taken shape in a major project – an action research on Universalization of Primary Education. The action research as a training modality has been successfully used in Pakistan, the Philippines and the Republic of Korea. In Pakistan, in the AIOU project for education for the rural masses, continuous action research is carried out in selected areas. During each cycle of the programme, feedback is received from the groups. Programmes and methods are modified accordingly. In Thailand, almost all the programmes and specially the co-operative research for transferring technology to rural areas are action research projects. The community-based in-service teachers' programme is an example of one more action research project of Thailand. Action research for rural development, action research for building a network of multi-disciplinary education teams for training of rural development functionaries – this is a major outcome emerging from the analysis of country reports.

Role of the teacher and the school. The formal school and the school-teacher seem to be looked upon with some suspicion in their ability to contribute to rural development. Though not very firm, this view is shared by proponents of the non-formal alternative education system in India. But there is an over-whelming opinion in the region that the formal school and the teacher still remain the nucleus for mobilizing the rural community and motivating them in self-development through community development. Nepal, Bangladesh, Thailand and the Republic of Korea have reported the successful involvement of teachers in the multi-disciplinary teams for rural development. In Bangladesh, teachers and other educational personnel prepared by the Department of Education help the functionaries of other development agencies by mobilizing community support in programmes of development. In Nepal, local rural schools play the role of catalytic and change agents in community development activities. In the Republic of Korea, under the supervision of the Ministry of Education, various types and levels of schools take charge of educating not only rural people but also prospective farmers. These educational institutions maintain a close relationship with people in rural communities. Vocational agricultural high school teachers in particular, have close contact with other educational groups such as extension workers, agricultural co-operative workers, voluntary village leaders and rural youth. These linkages play a vital role in programmes of rural development. Thailand also reports of schools and teachers closely involved in rural development programmes.

Apart from these six dimensions of training for rural development highlighted in the country reports, two additional points also emerged through their

analysis one point is the place of research in developing multi-disciplinary education teams and a network of resources for rural development. The second is the result of synthesis of understanding of concept of networking.

Research. In Bangladesh, the Bangladesh Academy of Rural Development bases its training programme on the results of field research experimental projects. The results are used to develop or modify training programmes. In India, national institutes like the National Institute of Rural Development, Indian Institute of Education, Pune, and the Indian Institute of Management, Ahmedabad, have considerable research activities. There is a planned dissemination of research findings to various agencies engaged in rural development. The IIE, Pune, utilizes its post graduate research scholars to study problems of rural development/rural education and bases its programme on the findings of research. In the Republic of Korea, research was undertaken to determine the factors that affected the impact of training. Research in agriculture research institutes focus on programmes and practices whereas research by rural development agencies focus on innovations and change. In Thailand, research is undertaken to identify rural problems and develop appropriate methodology for tackling them.

Networks. The term 'networking' was defined as the linking of organizations, institutions and individuals for a common purpose. Networks exist to foster self help, to exchange information, to change society. As each person in a network takes in new information, he or she synthesizes it and comes up with other new ideas. Networks share these newly forged thoughts and ideas.

Networking can assist development in three ways, (i) exchange of ideas, (ii) sharing of resources, and (iii) utilization of expertise. It is essentially a process that occurs between personnel rather than institutions and top-down attempts to promote networking are incompatible with the nature of the process. There is, however, need for a central policy which fosters the concept of networking while allowing flexibility for seeking participation at various levels. Educational research institutions which have an action research approach to issues of rural development were seen as natural centres for the development of networks.

The analyses of country reports have also thrown light on researches linked to training of rural development functionaries and building of network of expertise and facilities. The involvement of universities and research institutes has provided the needed infrastructure to plan and conduct research on the training programmes and their efficacy, the effectiveness of different training methods and the benefits accruing from planned programmes of building networks of resources. The overview of the country reports shows the tremendous strides taken by different countries in the region during the course of the last decade. The region is on the move with a justified feeling of pride in its achievements and an introspective view of its limitations.

Chapter Two

FIELD STUDY OF SELECTED PROJECTS

The two day study visit in the Pune District of Maharashtra State in India provided an opportunity for the participants of the workshop to gather first-hand information on multi-disciplinary teams, their training, networking and effect on rural development.

The centres visited were:

Vidnyan Ashram. This is a centre of the Indian Institute of Education at Pune and is currently conducting a project on non-formal science education in Pabal village. The project is funded by the Department of Science and Technology, Government of India. Pabal is a fairly big village with a population of about 4,000. It is situated in a drought-prone area.

Universalization of Primary Education Centre of the Indian Institute of Education in Khed Shivapur area. This project was started in 1980 with the assistance of UNICEF and the Government of Maharashtra in five agro-climatic areas of Pune district. Khed Shivapur is a medium rainfall area about 40 km from Pune.

Project on (Introduction of) Science and Technology for Rural Women at Rahatavade. Rahatavade is one of the six villages in the Khed Shivapur area selected in August 1983.

Purpose of the study visit

Attention was focused on the following factors connected with multi-disciplinary teams, their training, networking and effect on rural development: (i) the purpose for which the centres were established; (ii) historical evolution of the establishment of the centres and the problems encountered; (iii) organizational structure and management of the centres; (iv) activities organized by the centres; (v) planning and management approach used by the centres; (vi) expected outcomes; (vii) the interdisciplinary/integrated nature of content/syllabus; (viii) agencies that participate; (ix) training of trainers and their experiences; (x) use of materials drawn up by other agencies as aids; (xi) collaborative linkages with other agencies; (xii) resources available at the centres for implementing programs; (xiii) evaluation procedures adopted and plans for evaluating impact; (xiv) linkages established for the successful working of such a structure; and (xv) innovations introduced.

Methods of study

The methodology adopted in achieving the objectives of the field visits study was based on (a) presentation by the organizers/implementors at the local level;

(b) discussions following such presentations; (c) informal talks with those concerned; and (d) personal observations of participants which were given by the participants in their subsequent analysis.

Vidnyan Ashram, Pabal. The centre conducts a non-formal science education project for rural development at Pabal in Pune district. In the programme undertaken by the centre, an attempt is made to integrate the intellectual development of the community with training in skills, along with development of the community as a whole. The main features of this integrated activity for individual and community development are (a) learning by doing; (b) problem solving; (c) earning while learning; and (d) payment by the community for the services received. Practical work focused on water resources development; low cost construction; workshop technology; agriculture and animal husbandry.

At present the centre is working with youth in the 15-25 age-group, both part-time and full-time. It also gives lessons in work experience to about 210 students of class VIII in the secondary school at Pabal. Attempts are being made to introduce a three year course in rural technology in the secondary school.

Experiments in housing, sanitation, social forestry, dairy development and skill training for women have been undertaken along with the efforts to change the school courses in science.

Historial evolution. Dr S. S. Kalbag, formerly Chief Research Officer of Hindustan Lever and Co., voluntarily undertook to set up the Vidnyan Ashram in January 1983 to conduct innovative programmes in extension of science and technology for rural development. He is a highly motivated leader who has dedicated himself to the dissemination of science and technology for rural development and has settled in Pabal along with his multi-disciplinary team of assistants who live together on the campus.

Activities organised by the Centre. With the objective of using science and technology for solving rural development problems the following major themes were organized for school drop-outs and students in High Schools:

i) water resource development;

ii) soil analysis;

iii) low cost construction of buildings;

iv) workshop technology – repairs of pumps, electric fittings, preparation of steel tables, chairs, cupboards, stools, racks, etc. (school drop-outs);

v) energy and transport – repair of diesel engines, motors for bicycles; making of tyred-bullock carts with brakes;

vi) horticulture – planting of trees, fruit trees and vegetables and use of drip-irrigation;

vii) technical services to rural people;

viii) animal husbandry – cows, goats, poultry;

ix) work experience in nearby High School and practical work at the centre for a day;

x) knitting course for girls and women;

xi) experiments in housing, social forestry and dairy development.

The system of training of school drop-outs as water surveyors, soil analysers, building constructors, workshop assistants, electric fitters/repairers is very useful in rural development. However, there are certain weaknesses in the two year old project:

i) lack of discipline in students resulting in economic loss – wastage of material;

ii) there is no bench mark data for training with the result that some learn fast, others slowly;

iii) the centre depends on funds from outside sources to be self sustaining; and

iv) it has not been possible to give attention to rural women year.

Universalization of Primary Education (UPE) Centre of the Indian Institute of Education in Khed Shivapur area.

Centres under the UPE project were started in the Khed Shivapur area in 1980 and were closed in March 1985. The centre at Kondhanpur continued because local people offered to pay the teacher's salary.

The Kondhanpur centre visited was three months old. There were ten girls, seven had come from the beginning and three had joined a few days back. All the girls enrolled work during the day.

The project holds recurrent training of teachers every five or six weeks, at a village convenient for about ten to 20 teachers who can reach it on foot every morning and return to their homes in the evening.

Project on Science and Technology for rural women at Rahatavade.

The project has the approval and financial support of the Department of Science and Technology, Government of India from August 1983 to December 1985. It covers 121 households in six contiguous villages in the Khed Shivapur area and 90 Thakar tribal households in three hamlets near Kendur in Sirur Taluka.

While the total number of families covered is 211, the total number of women beneficiaries is 243 in Khed Shivapur area and 144 in Pabal-Kendur area.

The project aims to:

i) bring science and technology into the daily life of women in order to reduce drudgery and effect savings through energy-saving devices;

ii) encourage planting of trees and plants for fuel, timber, fodder and nutritious food;

iii) promote income generation activities through introduction of new technology for basket making, pottery, tinsmithery, carpentery, etc.; and

iv) improve health, hygiene, sanitation, home environment, child care and life styles.

The project has a staff of four educationists at the headquarters, two field assistants — one each for two areas, and ten animators. The field assistants and animators are trained at the headquarters in:

i) tree planting,

ii) organization of exhibitions on health hygiene and nutrition,

iii) supply and use of chulla (oven) and the 'hot box'.

Activities organized. Mahila Mandas (Women's Clubs) promote adult education for women with a strong element of science and technology activities. Local literate women have been selected as animators with three exceptions where women animators were not available.

Training of functionaries at the headquarters and in respective areas is multi-disciplinary as persons from health, social, forestry and audio-visual departments and experts in doll making and puppetry and diet and nutrition are invited.

To save energy standard designs of smokeless chullas and hot-boxes were supplied.

Trees and saplings at the rate of five to each family were distributed.

Over 900 trees and saplings were provided to families not involved in the project.

Science exhibitions on various aspects of health, hygiene and nutrition were organized to develop awareness of a scientific outlook, use of local herbs, consulting doctors and reduction of faith in witchcraft. Mahila Mandals supported this work.

Observations and comments on field visits

1. *Vidnyan Ashram*

i) Local leadership needs to be built up.

ii) Co-operation of functionaries of various development agencies is essential.

iii) It was noteworthy that the head of the nearby formal high school and local leaders were involved in the centre's work. Furthermore, attempts are being made to bring about changes in the formal school syllabus through a course in Rural Technology for Standards 8 to 10.

2. *Universalization of Primary Education (UPE) in Kondhanpur and Introduction of Science and Technology for Women in Rahatavade*

i) These villages are near each other. Both the projects are working well under the sponsorship of the Research Officer of the UPE centre. Kondhanpur is a small village with 912 population and Rahatavade a bigger one with 1,295 population.

ii) In both, the focus is on rural development and assistance of staff from Agriculture, Health, Animal Husbandry, Social Forestry, CASTFORD and Education Departments was mobilized. The local public was encouraged to work on their own development.

iii) A multi-disciplinary team for rural development was formulated. The Research Officer develops networks and the awareness the local people need to seek solutions to their problems.

iv) To work with rural women is difficult. In this village, a women's organization has been built up. The Science and Technology project is building up a scientific outlook. Women were not only able to use a "hot-box" for saving energy but were able to make the box. Women in this village provided evidence, when they told of their experiences, of attitudinal changes since their involvement in the project. They had developed confidence and courage and were able to come out and speak about children, their care, nutrition and birth control. Health personnel who came from primary-health centres were able to disseminate information. Mahila Mandals and Youth Clubs are potential allies and help lead mobilization for rural development.

v) As local leadership has been built up in both villages, the programmes are likely to continue even when the stimulator disappears from the scene. But this may not happen in Vidnyan Ashram where local leadership involvement and training of the second line in command is absent.

vi) For any change to be permanent, it has to be indigenous. Change must come from within the community through development of capabilities. Mere formal education is not enough. Support of non-formal education is essential. Education can build up self-confidence, insights and skills.

vii) In summary, it can be said that multi-disciplinary teams provided training to functionaries and that training was interdisciplinary and aimed at rural development.

Chapter Three

BUILDING NETWORKS

The countries of the Asia Pacific region have experimented with a number of innovative institutional arrangements and alternative formats for reorientating their education systems to the needs of rural development. The focus of these experiments is to make their education systems more relevant to the social, economic and political needs of their countries, particularly of the rural areas. The majority of their people live in rural areas and their participation in various aspects of national life will ultimately lead to the fructification of the development effort. In a large majority of educational efforts, a major weakness has been the absence of linkages between institutions and agencies. This absence of linkage has resulted either in duplication of resources or facilities or personnel making the expansion of the programme cost-prohibitive. The work done by non-governmental agencies has often been disregarded although one would think that they would be in a much better position than bureaucratic structures to undertake innovation and adapt them for wider adoption.

Institutions, by working on a common format and with a common focus, complement and supplement each other's efforts, thereby enhancing the impact of inputs. Networking of institutions would help in the development of the optimal strategy for directing diverse efforts of different agencies for achievement of a common purpose. It is, therefore, of primary importance to ensure that institutions concerned with education for rural development not only collaborate but also work in unison in reaching specified goals by contributing the best that each one is capable of. This approach helps in widening horizons and taking into consideration the views of others and thereby enables implementors to evolve a more effective approach.

Considering that rural development programs are multi-dimensional in nature, networking of institutions and agencies becomes particularly important. In the context of rural development and education's role in it, the agencies involved are not only educational. The development departments are also closely concerned with programs of rural development. Again there are a number of voluntary agencies working for rural development. Networking of educational institutions and other development agencies – public or private, is essential for an effective development of programs in rural development.

Levels

Networking is needed to link institutions concerned with achieving similar objectives or doing similar work. In education for rural development, the efforts of educational institutions and extension agencies of various development departments

have to be linked. Extension is, broadly speaking, an educational process. At the grass roots level, therefore, a school in a rural area becomes the main focus for networking for rural development. It has to seek the assistance of development agencies and utilize the expertise that they have in designing suitable educational programmes. The development agencies can provide the school with technical assistance for identifying relevant and suitable materials which can be incorporated in the curriculum and also in devising projects which teachers and students can undertake in the neighbouring community. In view of the above considerations, the first level at which networking can be attempted would be the institutional level where linkages can be established with the local extension agency of the development departments. The other levels at which networking has to be done are where decisions are taken about the school, the teacher, the curriculum and teacher training. These levels are district, state, and national. It is at the state level that more concrete programmes which link education and rural development efforts can be worked out and lines of mutual collaboration and support among departments and institutions developed. For example, institutions of general education, technical, agricultural and health education can come together and design a project. In one of the Asian countries, when the health department wanted to design a special programme for rural health and sanitation, it approached the education department and with the involvement of schools, teachers and students, voluminous data was collected within a remarkably short time which enabled the health department to design the programme. For the schools, it was an opportunity to acquaint students with the problems of rural health and sanitation.

At a higher level, networking appears nebulous. As one goes down the level, however, the establishment of appropriate linkages takes a more concrete shape. Some of the instances of networking of institutions and agencies reported in this chapter make this very clear.

Linkages

A second aspect of networking is the type of linkage. Linkages are not concrete. They are apparent only during the operational process. These linkages may be horizontal or vertical. Vertical linkages would have to be established within each sector. Agencies at the national level need to be linked to state level agencies which need to be linked with district level agencies. The process ends when the last link extends to the rural community. The horizontal linkages bring together different states, districts, schools and communities. In the school clusters of Thailand, the horizontal linkages exest in the school network. The school complexes of India have both vertical and horizontal linkages. Horizontal linkages develop fast if there is physical proximity among institutions. Vertical linkages get strength where programmes are planned and decisions are taken at a higher level. The vertical linkages are needed for quick approval of actions and flow of resources whereas horizontal linkages stimulate interaction between equals and help sustain morale during programme development.

The different models of networks identified during discussion are presented in the section that follows.

BANGLADESH

Networking of resources, resource persons and facilities has been built by the Bangladesh Academy for Rural Development (BARD) in its project on rural youth. The BARD experimented with various approaches to remove illiteracy from the villages of the Comilla area and to give the education a rural bias and finally to develop a model of rural education for replication in other areas of the country. The first experiment was with the objective that youth must have schooling and alongwith it be introduced to improved agricultural practices. With this end in view a Committee was formed with members from the local high school, primary school, Thana Education Officer, Thana Co-operative Officer, Thana Development Officer, and an expert from the BARD, together with local leaders.

The functions of the Committee were to: (i) make the schools centres of extension work; (ii) start projects on improved methods in schools; (iii) train teachers in methods of co-operative organizations; (iv) channel youth leaders into extension work and co-operation; (v) run training courses for youth leaders and school teachers; (vi) provide adult education centres with useful literature, especially on agriculture and co-operatives; (vii) run a circulating library; and (viii) organize camps, project competitions and exhibitions.

Initially 12 primary teachers were trained by BARD with the help of the Thana Education Officer (TEO). After training they formed a 'Sabuj Sangha' club which aimed at (a) better school education; (b) sound health; (c) individual and group projects; (d) character building; (e) self-help; and (f) constructive social work.

The 'Sabuj Sangha' worked under the guidance of teachers, TEO, local leaders, Thana level officers and BARD workers. The office bearers of the 'Sangha' were democratically elected. The local co-operatives also helped the 'Sangha' boys. These boys worked in the co-operative agricultural plots with their parents. The primary teachers who guided these 'Sabuj Sangha' were occasionally trained at the BARD on improved agricultural practices, poultry raising, animal husbandry and health care. They met twice a month at the Thana headquarters to discuss the progress of the project. After training the teachers, Sabuj Shangha boys were also trained at the BARD.

The 'Sabuj Shangha' projects were both individually and collectively conducted. Individual projects were at home to raise vegetables, poultry and livestock and for clay modelling, needlework and handicrafts. Competitions were held in January and prizes were awarded for the best performance. Collective projects included a co-operative store, library, museum and weekly savings programme.

Networking has helped to bring the primary schools closer to the development agencies.

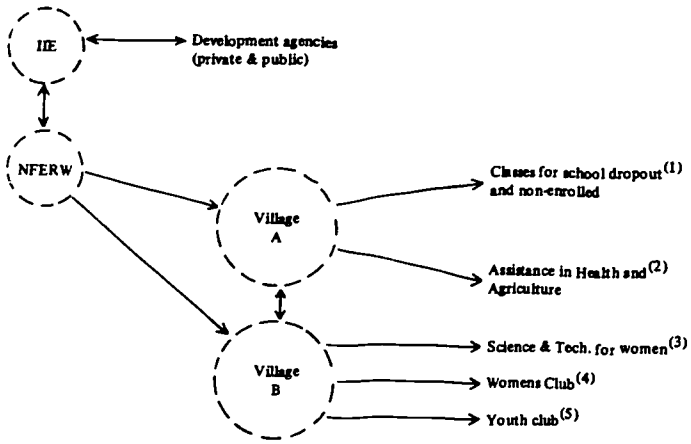
INDIA

For balanced development in rural areas, various agencies engage in social, economic, technological and agricultural upliftment functions. Education is one

In this network, resources, expertise and facilities of all agencies are utilized at stages of rurai development programmes such as training, development of course material and development of equipment.

The state level network promotes networking of facilities at the local level. An example of local netwerking with clear vertical and horizontal linkages is seen in two adjoining villages of Haveli Block in Pune District. There is one Research Officer (NFERW) in charge of the project of Universal Primary Education. He is trained by the multi-disciplinary training team of IIE. He has organized classes for non-enrolled and drop-outs in the age-group 9-14 years. He provides help in the areas of health, animal husbandry, poultry and agriculture by procuring the services of the functionaries of the Departments of Health and Agriculture. He helps in the project for taking science and technology to women. He has stimulated the organization of youth clubs and womens' clubs. The networking of agencies is shown in Figure 2.

Figure 2. Networking of agencies in support of IIE



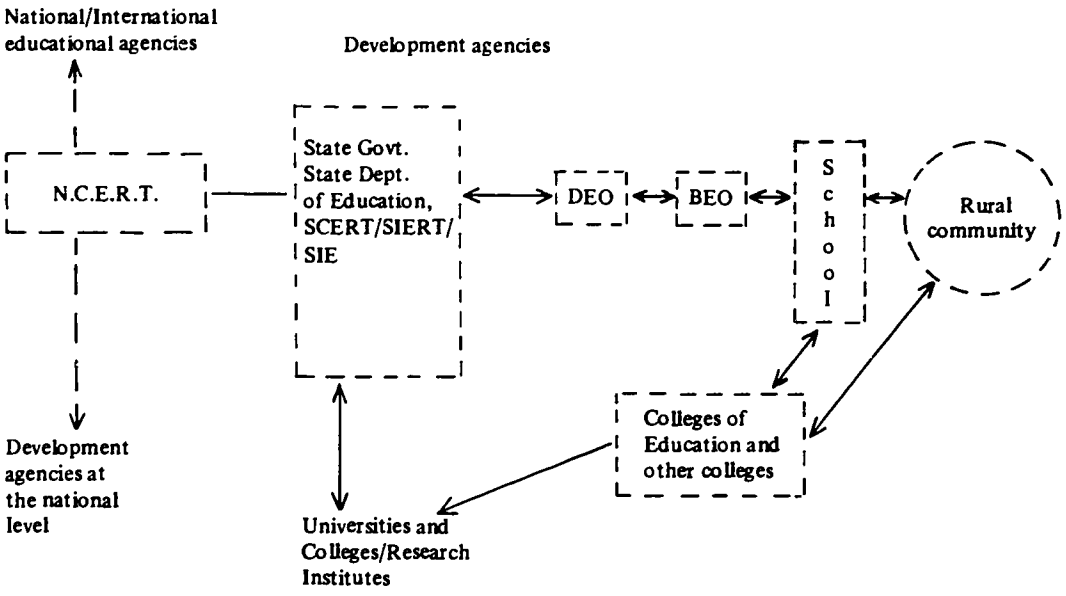
Horizontal Linkage. The leaders and participants of activities 1, 2, 3, 4, 5 have developed linkages to share expertise, facilities and services.

Vertical Linkages. The NFE Research worker has linkages with the experts in the IIE at Pune.

In the formal sector of education, there are national level, state level, district level and block level networks with vertical and horizontal linkages. A national level network is briefly given below.

The national council for educations research & training (NCERT) is the apex level national institute for educational development and improvement. It works with the State Councils of Educational Research and Training/State Institutes of Educational Research and Training/State Institute of Education (SCERT/SIERT/SIE). The state level institutes have linkages with schools and colleges of education either directly or through the District Education Officers (DEO) and other officers at the block level (BEO). Schematically the networks is represented in Figure 3.

Figure 3. Networks of agencies in support of NCERT



There are two programmes in the formal education system of socially useful productive work: (a) community services in the school curriculum; and (b) training in working with the community in the teacher education curriculum. Through these programmes, the schools and the colleges develop linkages with the work of rural development.

An example of networking of expertise and facilities is seen in the Indian project of Integrated Child Development Service. The execution of this project involves (i) the Department of Child Development of a college or a university; (ii) the Department of Foods and Nutrition; (iii) the Department of Pediatrics; and (iv) the Department of Psychology. All these departments are involved in the training of volunteers and field workers who work in rural areas for child development.

In India, 100 Nehru Yuvak Kendras (Nehru Youth Centres) have been set up under the auspicies of the Ministry of Education at district headquarters for training urban and rural youth in productive skills. Each centre has a co-ordinator and supporting staff. The co-ordinator approaches extension wings of different development departments to organize lectures demonstrations and skill training for rural youth. A small scale network develops every time a training programme is undertaken. The development agencies include small scale industry extension, industrial training institutes village industry commissions and agricultural extension.

Another example is Krishi Vidnyan Kendras (Agriculture Science Centres) for promoting scientific literacy in rural areas and for imparting skill training through the method of work experience. At each centre there is provision for a crop farm, horticulture, garden, agriculture workshop, field oriented laboratories, fish pond, demonstration units for poultry farming, piggery, sheep farming and a home

science laboratory. The staff consists of a dozen scientists – visiting trainers are invited from agricultural colleges, home science colleges and other agencies. Here the network is built round a stable, multi-disciplinary team which invites visiting trainers from outside. The major purpose of the network is to share the expertise and reduce the financial input.

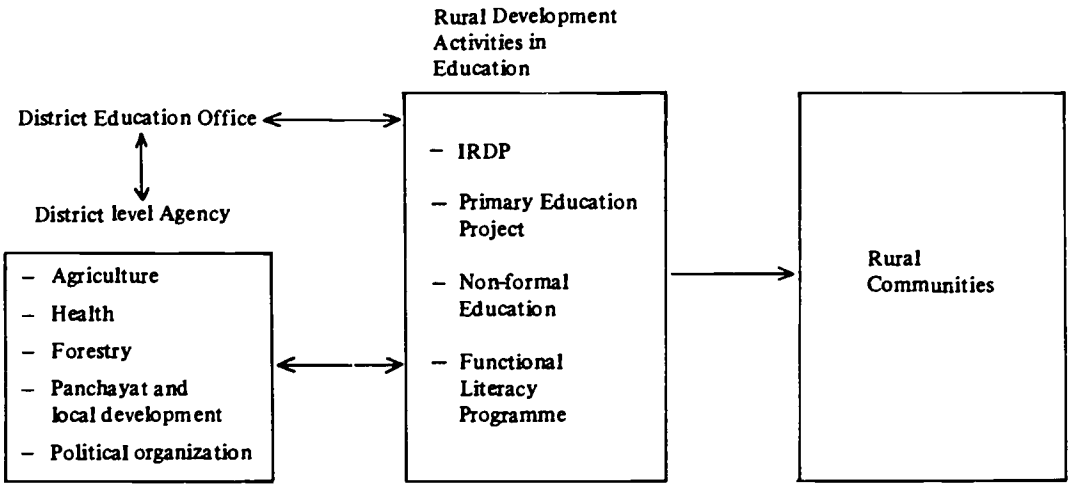
The formal schools have also been involved in programs of rural development. Under a "Developmental Activities in Community Education and Participation" project over 100 schools have been entrusted with the task of developing education and skill development programs for diverse sections of the community. The various educational programs are – pre-school education, out-of-school youth, illiterate adults, young girls and housewives. Here the network consists of the school, the village panchayat, youth and leaders of the community. The effort is to test new types of educational activities which can meet the education needs of the total community. The approach followed is based on the premise that to be relevant and meaningful children's education has to proceed concurrently with gradual changes in their socio-economic environment.

An interesting project is being implemented in India with the objectives of developing curriculum materials on health, nutrition and environmental sanitation (problems of particular concern for rural communities). Through these materials, the primary school teachers communicate to rural communities messages about improved practices of nutrition, health and environmental sanitation. There is a special training course for primary teachers organized in co-operation with instructors from the Departments of Health, Food and Nutrition. Students and teachers are encouraged to survey local communities to obtain data on available resources and practices. Through workshops involving teachers, experts and community leaders, learning materials are developed for the instructional programmes of non-formal education centres. The process of developing the materials gives rise to a network of development agencies under the co-ordination of the project leader. An important facet of the project is to work with the community to provide information about such issues as the nutritional value of locally available materials and the relationship between prevailing practices and unsanitary practice leading to morbidity. This project was started in a cluster of schools in the neighbourhood of five home science colleges and university departments and now the project has been extended to 14 more centres. Networking is between home science colleges, primary school teachers, health and agriculture extension agencies.

NEPAL

In Nepal, there is a National Education Committee (NEC) which is the highest legislative body in the country. The NEC formulates national education policy. It makes suggestions to the Ministry of Education and Culture (MOEC) on the implementation the programme throughout the country. MOEC executes these projects with the help of the Regional Education Directorate (RED), the District Education Office (DEO) and Tribhuvan University and its institutes and campuses.

Figure 4. Existing network in education in Nepal



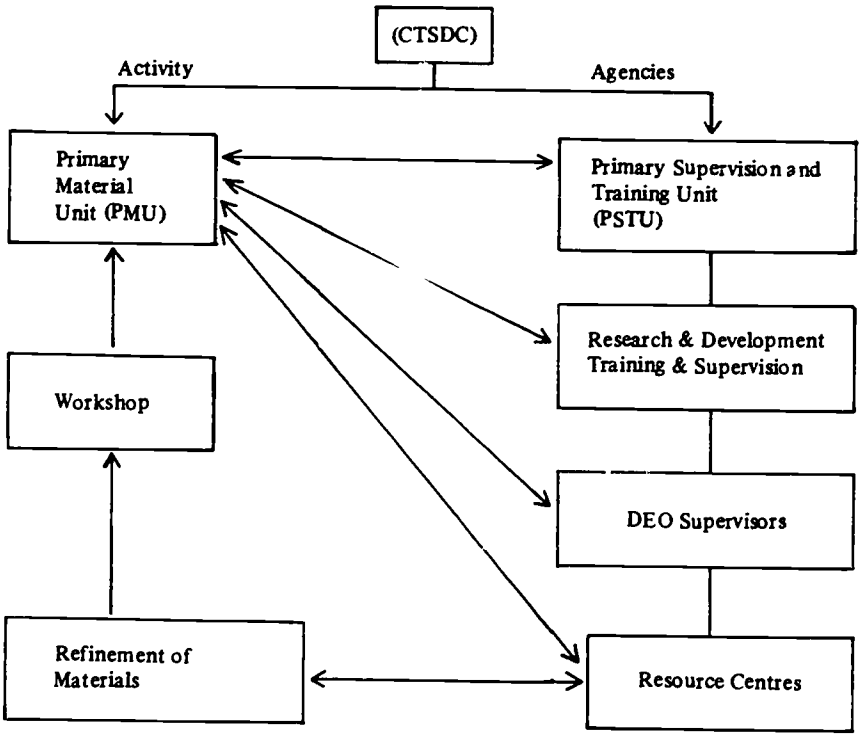
There is no forman networking system at the ministry level but the District Education Office establishes rapport with various agencies working at district level and conducts educational training programmes with their help. Some examples are functional literacy classes, school teachers training and forestation programmes.

The primary education project. This project has been launched by the government with the co-operation of UNICEF and the World Bank in six districts. It is a replication of the Seti Project on Education for Rural Development. The main programs in this project are: (a) Development of physical facilities of primary schools; (b) Teachers training programme; (c) Low-cost educational materials preparation; (d) Supplementary readers programme; and (e) Resource centres.

The Director of the Primary Education Project establishes rapport with central level agencies such as the Curriculum Textbook and Supervision Development Centre (CTSDC). It prepares the broad program and sands it to DEO for implementation. In the DEO there is a Primary Education Project Unit provided with a field-co-ordinator (FC). The FC prepares the training programme under the guidance of the DEO with the help of school supervisors, experienced teachers, specialists of CTSDC and experienced leaders from other local level agencies. This programme is conducted at Resource Centres (RC). There are 10 RCs under one field co-ordinator and six to 12 satellite schools under one RC. Satellite schools are located around an RC at one to three hours walking distance. The RC is considered a community development centre and all the activities like training and education material preparation are conducted at the RC by a resource person who is in charge of the centre.

The CTSDC plays an important role in the conduct of various activities at RCs. This can be better understood from Figure 5.

Figure 5. Roles played by the Currenculum Textbook and Supervision Development Centre (CTSDC) for Development of Resource Centres

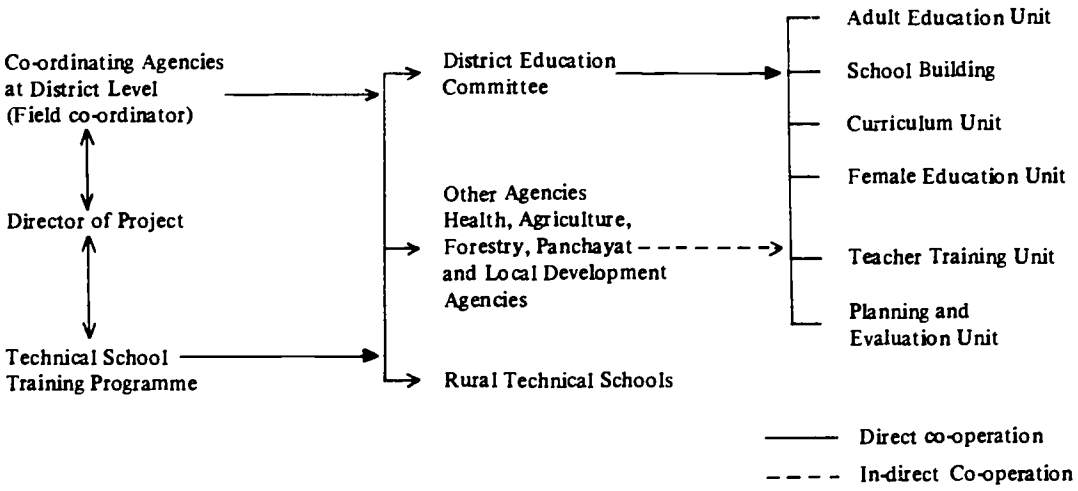


Satellite schools have managing committees and they mobilize the local people for physical development of schools. The project office provides 40-45 per cent of the financial contribution for the school building improvement programme.

Education for rural Development (ERD) in the Seti Zone Project. The ERD Seti project is being run by the government with the co-operation of UNDP, Unesco, and UNICEF. This project is being launched in one of the most educationally and economically backward areas of the Kingdom, the Doti, Bajhang and Bajura districts of Seti zone.

The project is being implemented to: reduce wastage of resources, and to make the basic educational system (primary and adult education) more efficient and effective; make the primary school a community centre and the primary teacher a change agent for rural development; and introduce changes into the basic educational system, so that it produces an immediate impact on the solution of some of the major problems of rural people.

Figure 6. Networking of Seti (Education for Rural Development – RED) projects with various agencies



The Field Co-ordinator establishes rapport with other agencies at district level and conducts all the educational activities in rural areas. There is no organised networking at Ministry level with other agencies. The Planning Division of MOEC makes requests to other agencies to help education at district level to run their programmes effectively and efficient.

The Technical School Programme has been introduced to produce basic level manpower in local settings and retain their services for rural development and rural development projects.

This programme has built-up good networking at the national level as well as at the grass roots level. At the school level the principal of the school establishes rapport with various agencies like agriculture, health, forestry, local campuses of the universities and local skilled people to conduct its training, practical and on-the-job training programs. Students graduating from this school get support from other agencies to get jobs in various employing agencies.

PAKISTAN

Rural development programmes are developed by both government and private organizations. Joint projects of a collaborative nature not only help in pooling of resources but also in appreciation of the inter-disciplinary linkages that emerge. As a result a network of facilities, expertise and agencies is taking shape. Allama Iqbal Open University with its distance teaching methodology is perhaps an example. Being a university of national repute, it has the advantage of serving as a neutral base for co-ordinating the work of most of the nation building departments. In the university although the Basic Functional Education Programme in rural areas is the responsibility of the Literacy and Mass Education Department a Basic Functional Course Committee (BFCC) made up of relevant heads of academic departments and those of different nation building departments or institutions has been

formed. The committee works under the chairmanship of the vice-chancellor and has a sub-committee called the Liaison Committee which makes regular contacts with other agencies and in consultation with them appraises the possibilities of formulating joint educational projects that may fit into their extension programmes. Once these projects are mutually identified and course proposals developed the BFCC, after examining them, allocates the task of designing and development of suitable learning packages to a course team, the members of which are again drawn from different academic and other service departments within the university and from the concerned nation building department or agency. These teams are actual working groups who work on the development of the whole learning package in an inter-disciplinary way.

Each time a project agreement is signed a new course team comes into existance. There are instances where a single project was signed by more than two or three agencies and a multi-disciplinary team in the real sense of the term emerged. Since the university primarily follows a "train the trainers" approach, the functionaries on the field staff of these collaborating agencies are jointly trained in common training sessions and this facilitates pooling of their resources. Presently the university has been able to successfully launch a number of functional courses for illiterates in rural areas in this collaborative way. Experience has demonstrated the fact that only those collaborative networks which evolve as a matter of necessity out of the mutual needs of different agencies survive over time. Patterns may also vary from one project to another. What seems to have attracted these agencies to cluster around the Open University is its distance teaching methodology that results in multiplication of resources. The influence of a single good teacher, a lady health visitor or a veterinary doctor can be multiplied into thousands and made to reach every village with the help of TV or cassettes and flip-charts. This obviously makes the spread of these programs possible even to far off places.

PHILIPPINES

To effect better integration of efforts for rural development, there is a need to establish co-ordination among organizations, institutions or structures that have rural development as their mission. This results in networking of organizations, institutions and agencies working for rural development. In Philippines, the procedure for building effective networks that has evolved through experience involves the following:

a) A survey of institutions and agencies, their resources – human and physical – that can be shared with others; training programmes conduct conducted by them that they can be shared with others; a directory to be published at the end of the survey.

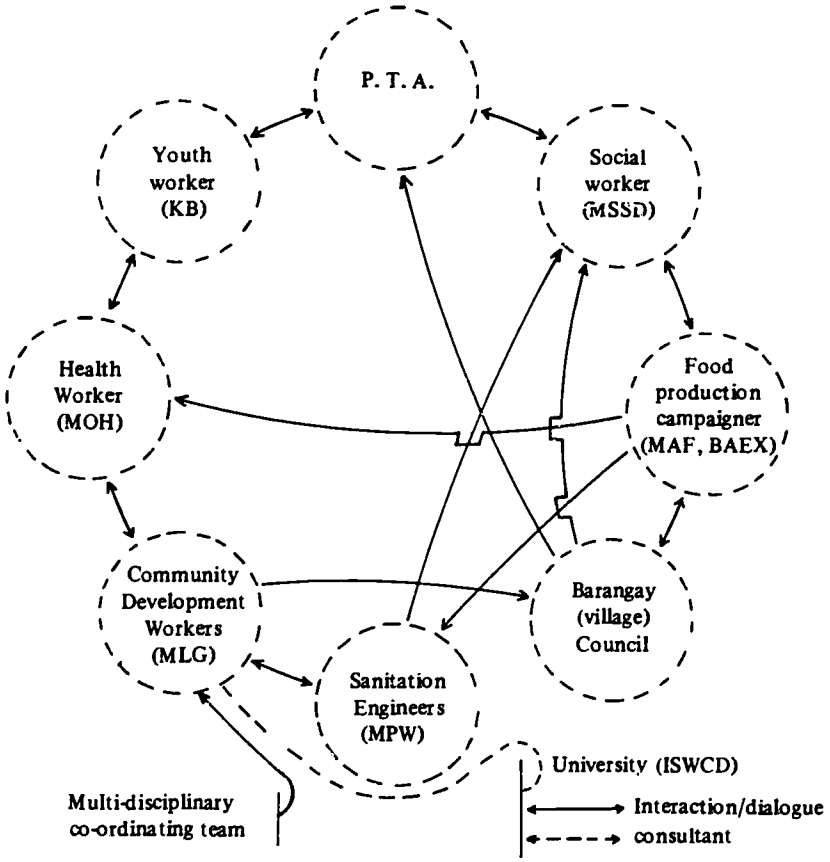
b) A survey of needs of institutions and agencies for in-service and pre-service training.

c) Matching of needs and resources among or between institutions.

Effective networking is made possible if the above information is available for all.

The most important aspect of networking is the establishment of working relationships among the different institutions and organisations. Questions may come up like who conducts the training? What is the contribution of each agency or institution? How can team work be effected? It may be difficult to create a network for all the educational components of rural development. But smaller networks can be created and allied disciplines like health, sanitation and nutrition may form a sub-network. Thus, in the Philippines, a network for these educational components can be illustrated as shown in Figure 7.

Figure 7. Educational components : Health, nutrition and sanitation



REPUBLIC OF KOREA

One of the multi-disciplinary education teams for rural development is that of teachers who teach future farmers, adult farmers and rural housewives, together with researchers at colleges of agriculture and agricultural research institutes.

There are two main educational and agricultural research institutions in which these teachers and researchers are engaged. One is controlled by the Ministry

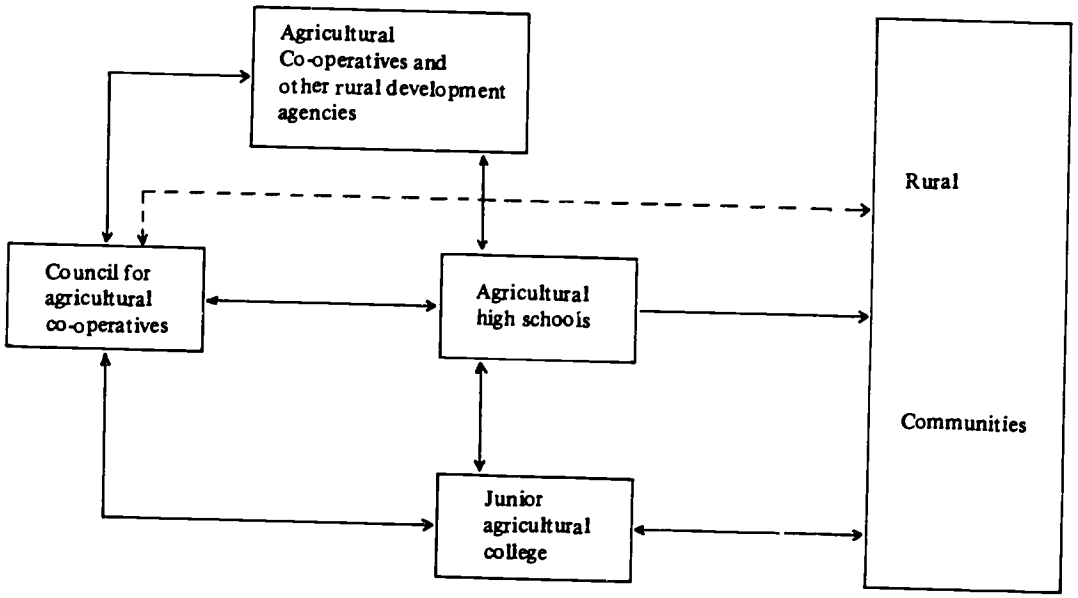
of Education under which agricultural high schools, junior agricultural colleges and four-year college of agriculture exist. The other one is controlled by the Ministry of Agriculture and Fishery in which are found rural development administration, provincial Rural Development Administration, and country offices of Rural Guidance.

Even though the organization and functions of the two educational and agricultural research institutions are different, the ultimate purpose of each is rural development. To achieve this purpose, there are strong institutional linkages not only between these two but also among other agricultural education institutions and agricultural organizations. The government recognized the importance of co-operation between agricultural education, research institutes, and other organizations and regulated it through the Council for Agricultural Co-operation.

The main functions of the Council for Agricultural Co-operation are to:

- decide common goals and ways and means for agricultural development at national, provincial and local level;
- arrange for use of specialists from different institutions as teacher, researcher or resource person;
- co-ordinate use of facilities and equipment of the institutions;
- co-ordinate the use of schools for in-service education of staff of other agricultural institutions; and
- co-ordinate the role of other agricultural institutions in work experience programme for students studying agriculture.

Figure 8. Network focused on the roles of agricultural high schools for rural development



THAILAND

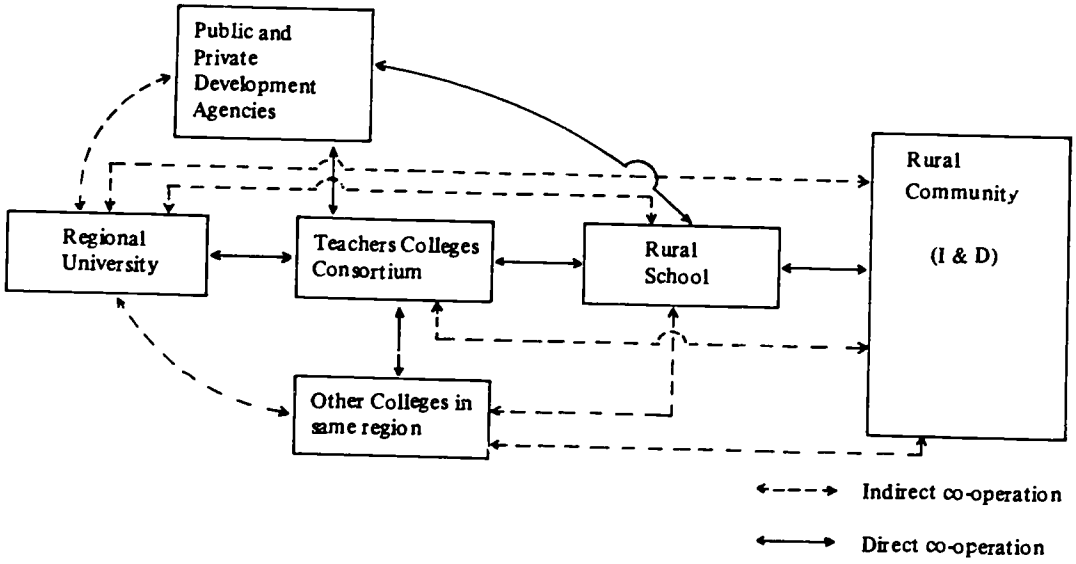
In Thailand, networks of educational institutions have been built up through measures taken by the Government. The Department of Teacher Education has 36 teachers' colleges under its jurisdiction. These colleges undertake training of teachers at certificate and degree levels. They are divided into eight consortium and a consortium may have from four to eight colleges in it. In terms of administration, the Department of Teacher Education acts as co-ordinator of teachers colleges and other national agencies, particularly the ones under the Ministry of Education. One of the responsibilities of a teachers' college is to organize educational services to the community. It is through this programme that the teachers' college is involved in rural development.

Each consortium of teachers' colleges has built up a network of institutions through which members of the network share facilities, expertise and experiences. In the Northeastern Teachers' College consortium, there are eight teachers' colleges. Mahasarakam Teachers' College is geographically situated at the centre of the region. It is therefore still regarded as the headquarters of the consortium. The networking of institutions is extended to a large category of institutions and agencies. They are (i) Khon Kaen University and its various faculties such as Engineering, Education, and Humanities; (ii) The eight Teachers' Colleges of the region and other colleges including the College of Agriculture; (iii) The primary and secondary schools in the region; (iv) other developmental agencies like the Departments of Agriculture and Health. These developmental agencies are both governmental and private. The Rector of the Northeastern Teachers' College Consortium is the co-ordinator of the activities of this network.

The main objective of this network is to build up co-operative efforts for strengthening the programme of rural development. The network is given schematically in Figure 9. In the scheme, the rural schools are not functioning as individual schools but as integral parts of clusters of primary schools initrated by the regulation of the office of the National Primary Education Commission, Ministry of Education. The public agencies have direct responsibility for rural development. The teachers colleges, the university and schools share this responsibility by preparing personnel for rural development, providing educational services to the community, and actively participating in rural development. Khon Kaen University plays its role by offering educational and technical services according to the needs of the community and by studying the problems of rural communities and reporting the results to concerned agencies for further action. The Universities and teachers colleges are the source of knowledge, ideas and methods needed in the programme of rural development by other agencies.

An example of the effective and co-operative functioning of a network for a programme of rural development is seen in a project on local and national development of technology for rural areas. This project aimed at using alternate sources of energy for community development. The project involved the Faculty of Engineering of the Khon Kaen University, three teachers' colleges and the rural community.

Figure 9. Educational network for rural development in the northeastern region Thailand



The Faculty of Engineering contributed academic expertise. Teachers' Colleges had a network of rural schools to collect data and disseminate knowledge to the concerned agencies. The Faculty of Engineering designed a prototype and the Teachers' Colleges made additional prototypes from the designs for demonstration in the rural communities. The Faculty of Engineering and Teachers Colleges co-operatively studied and followed up the work for technological improvement and explored alternatives for further co-operation. The Faculty of Engineering organized a ten day training course on local technology development for college instructors. The aim was to teach fundamental machinery to the people in the villages. The training to Bachelor of Education students who were involved in this project were co-operatively organized by the Faculty of Engineering and Teachers Colleges. With the help of the Faculty of Engineering, one of the teachers colleges had set up a centre of rural technology with an exhibition along with directions for construction. During the course of this project, the Faculty of Engineering helped teacher' colleges to develop a curriculum and training programme for teachers and a hand book for substitute energy sources and methods of developing and utilizing local technology. In this programme other development agencies and Departments of Community Development and Agriculture were also involved.

A second example of networking of institutions for rural development is seen in the same consortium of teachers' colleges. In 1977, the Northeastern Teacher' College Consortium launched a training project called the Community-based In-service Teachers Programme (CBITP). This training was conducted in actual rural conditions. Teacher colleges and local educational agencies in co-operation with other developmental agencies established training centres making use of existing facilities. The curriculum of training was based on the experience of the trainers and trainees in the rural situations. The trainers were mostly from

teacher' colleges but the trainees included school teachers and educational personnel from other developmental agencies such as the Department of Rural Development, Ministries of Health, Agriculture, Extension and the Police Department. The CBITP thus had linkages between different agencies connected with rural development through the trainees. This programme resulted in the development of a training curriculum which was rich in its inter-disciplinary content due to feedback received from trainees.

Another example of a network of institutions and agencies working for rural development is the Pang-Min Rural Development Project. Pang-Min is a small village in the district of Sankham, Utaradit Province. The project is operating under the co-operation of the Utaradit Teacher' College and the Northern Teacher College cluster. The network, in relation to this project, includes Utaradit Teacher College, Technology Institute of Agriculture, the Faculties of Nursing and Pharmacy at the Northern Institute of Technology and clusters of schools. There are many examples of networks of teachers' colleges clusters working for rural development in other regions of Thailand.

Networking : Modalities and guidelines

A close scrutiny of the experiences of member countries in building networks of institutions and agencies reveals the difficult nature of the process. It also shows the inadequacy of formal educational institutions and the lack of experience of new non-formal agencies. Networking of institutions and projects in education becomes particularly important in view of its multi-dimensional nature. Networking is not easy to accomplish particularly when there are different controlling authorities, role perceptions and clientele. It requires physical proximity of institutions so that without much cost and inconvenience, facilities can be shared. It is not always easy to ensure such proximity in rural situations.

It is possible to evolve some general guidelines for building networks from the experiences of countries in the Asia and Pacific region. Each member country will develop its own guidelines for its functionaries.

1. It would be desirable for educational authorities to create in other development agencies an awareness and understanding of the significant role that education can play in promoting the efforts the latter are making for rural development. The functionaries of the development agencies need to recognize that children become, in a way, educators of the household by informally communicating the knowledge that they have obtained in the school.

2. In all plans of integrated rural development, considerable thought should be given to the educational component.

3. Network building is easy in respect of institutions concerned with achieving similar objectives and doing similar work. Therefore, network building may preferably begin where such conditions prevail.

4. Networking may be tried out at the highest level for policy making and deciding the involvement and responsibility of the development agencies participating in rural development programmes.

5. In all training programmes, communication methods and techniques of extension education should form a necessary component. Sociologists, social workers and agricultural extension workers can provide effective training in communication techniques.

6. In any project, the extent to which networking is actually taking place should be periodically studied. The barriers to network building should be identified early and steps taken to break the barriers.

7. It is the experience of many nations that the formal educational structures are not suitable for rural development programmes and wherever possible, non-formal agencies may be assigned the leadership role in programmes of rural development. In such cases, the formal educational institutions instead of being the agents of rural development, may become the beneficiaries of the development programmes. Conscious efforts, however, should be made to streamline the rural school to enable it to play a leadership role in rural development.

8. The representatives of development departments in the rural area should not be disregarded even though their ability might be limited. Like the formal school, such functionaries should be considered as beneficiaries of the programmes. They should be built up for the benefit of future programmes.

9. A very important requirement of rural development programmes is to build up the local leadership as early as possible. If this is not done, the continuity of the programme will be doubtful after the exit of the outside agencies. Rural development efforts must be basically indigenous.

10. Motivation of the local community and an attitudinal change are important stimulus in a programme of rural development. Adequate provision should be made with respect to these ingredients.

11. The agency spearheading any rural development programme should not fail to build up a research base for the programme. The new programmes should be based on the findings of the earlier research. The programme should generate additional data on which new research is built and findings derived for the benefit of future programmes.

12. Networking is facilitated if a usable data bank about the community and the functionaries of development agencies is built up. Information should be periodically supplied about the expertise available in various development agencies, the training programmes of different departments, their resources and facilities. Such an information-base would create a climate for building effective networks.

Conclusion

Networking is not a new concept. However, to systemetically build institutional linkages is a rather new idea. The descriptions of various networks indicate the variety of possible structures and forms of networks. If networking is governed by the principle of flexibility, it could be much more creative.

Chapter Four

ALTERNATIVE STRATEGIES FOR TRAINING

Any programme of rural development depends upon various factors for its successful implementation. The training of Functionaries to equip them to implement programmes and projects is obviously a matter of great importance and is receiving the active consideration of training institutions and organizations in the Asian and Pacific Region. The countries within the region are always concerned with improving the quality of the persons working for rural development projects. Consequently, there is a built in programme to improve the quality of training.

Functionaries in rural development come from different development departments like health, agriculture, education, information and communication.

The country reports show that new training programmes and strategies are being developed by member countries. Since rural development is a multidimensional programme, the training of its functionaries has to be of necessity, multidisciplinary.

The participants presented papers outlining rural development training activities in Australia, Bangladesh, India, Nepal, Pakistan, Philippines, Republic of Korea and Thailand. The papers focus on one or the other of the following aspects of training: the multidisciplinary nature of trainers, the multidisciplinary composition of the trainers, innovative strategies, innovative training methods, retraining of functionaries, development of materials, training of supervisors and training of instructors.

AUSTRALIA

An innovative strategy and set of training programmes have been developed by Hawkesbury Agricultural College in Australia. The strategy has as its aim preservice multi-disciplinary training of agricultural graduates and is a practical model for other institutions wishing to develop a multidisciplinary training strategy. Hawkesbury Agricultural College has the largest faculty of Agriculture in Australia and was established in the 1890s. In 1978, it embarked upon a programme of reform which aimed at producing graduates with a multi-disciplinary rural development perspective instead of the narrow agricultural production perspective that had prevailed till that time. The extent and nature of the change is reflected in Table 1.

Table 1. The Extent and Nature of the Change of Hawkesbury Agricultural College

	1978	*1985*
ACCREDITED PROGRAMMES	6 semester Diploma in applied science (Agric.)	(7 semester Degree in Applied science (Agric.) (7 semester Degree in Applied science (Hort.)
	4 semester associate Diploma in Horticulture	(4 semester Assoc. Dip. in Hort. (4 semester Assoc. Dip. in Animal Production (4 semester Assoc. Dip. in Horse Management, in conjunction with a second College. 4 semester Assoc. Dip. in Crop Production.
	2 semester Graduate Diploma in Agriculture	2 semester Graduate Diploma in Agriculture
PROGRAMMES STRUCTURE	Unitized curricula of science, applied science, technology and management subjects with specialist majors – all involving practical agricultural husbandaries. Full-time on campus.	Essentially self-directed curricula based on achievement of a matrix of competencies around problem-solving, effective communication and autonomous learning. Includes off-campus phases of real world experiences.
PROCESS	Lectures and practicals	Experiential (problem-based) strategies
FOCUS	Reductionist technology	Systems agriculture
ORGANIZATIONAL	Discipline based departments which controlled "majors" with specialized human and physical resources including laboratories and demonstration farms.	Function based management teams for programmes, outreach, centralised resources, learning package development, curriculum evaluation and staff development.
DECISION MAKING	Centralised	Participative
CLIMATE	Relatively conservative. Closed.	Innovative for change. Open.

There are 350 undergraduate students involved in the three and a half years Bachelor of applied science (Agriculture) programme. The learning strategy for the programme is based on the development of core competencies rather than specified knowledge of subject matter. The competencies are autonomy as a learner, effectiveness as a communicator and ability to improve agricultural situations and solve agricultural programmes. The programme develops a systems orientation in its students and they are aware of the complex of social, human and natural factors involved in agriculture.

The competencies are developed through a process of "learning by doing" with an emphasis on situation improving projects in actual off-campus rural situations. To enable this to happen each student is placed on the form of a co-operating farmer for four months mid-way through the programme. There, they live and work with the farm families. They also conduct a systems analysis of the situation.

Together with the farmer, they identify problems or issues they can subsequently work on as problem-solving and situation improving projects when they return to college. These projects are a form of action research.

The projects undertaken by the students are supported by learning materials and activities developed by the staff. Group activity is a feature of the programmes and the creation of an interdependent learning environment is cultivated.

Students do not sit for examinations. They apply in writing to progress from phase to phase and to graduate. For their written submissions they use learning projects validated by staff and other qualified people to substantiate their level of competency development. They also meet with an assessment panel and make a personal presentation of their claim for progression or graduation.

Because the projects are based on real situations they are inevitably multi-disciplinary. Students are expected to utilize appropriate resource people and they soon become adept at identifying and contacting appropriate resource people from a wide range of disciplines, on and off campus.

The strategy results in government agencies, farmers and commercial and marketing organizations being involved in interdependent learning projects with students and staff of the college. During the last year of the programme students work on projects related to the career they wish to pursue potential school teachers with education bodies, extension worker with extension agencies, commercial representatives with commercial firms and so on. The net working on which these linkages are based is initiated by staff and students, usually on an informal basis with individuals in the various organizations.

Evaluation to date has been of an essentially qualitative nature and the evidence to date suggests the strategy is effective. Qualified representatives from organizations that are potential employers of graduates are included in graduation assessment panels. Feed-back from these people and organizations that have employed graduates suggests that they have developed the desired competencies to a professional level and a multi-disciplinary rural development perspective.

BANGLADESH

In Bangladesh, the main task in the area of rural development programmes is the development of human potential for which many training facilities have been created. The country needs trained manpower as an essential factor in its socio-economic development and consideration is given to the need for increasing the quantum of investment in manpower training. Various agencies are providing training for rural development functionaries. They are the ministries of Local Government, Rural Development, Co-operatives and Land Administration.

Under the Ministry of Local Government there are a number of training and research institutes including the Bangladesh Academy of Rural Development (BARD), the Regional Academy for Rural Development (RARD) at Bogra and the

Local Government Institute at Dhaka. The BARD developed the Thana Training and Development Centre (TTDC) at Comilla Kotwali Thana for the training of farmers, local leaders and other villagers. Such centres now exist in almost all thanas.

In addition to the training institutes under the Ministry of Agriculture there are agricultural colleges and universities which provide training to rural education workers. The Department of Agricultural Extension and Teachers Training of Bangladesh Agricultural University has facilities for extension, education, training and research. There are eight agricultural extension training institutes for training Thana and Union level extension staff.

The training programs have the following focal points: emphasis on practical training; pre-service, in-service and on the job training towards field work to create appropriate attitudes; training of trainers through seminars, workshops and refresher courses. The BARD has an innovative approach to training for rural development. The training component must be supported by research and research has to be supported by data to test theories and find workable models. The Academy trains 3 types of cadres:

i) Officers who are connected with rural work such as civil administrators, agricultural officers and education officers;

ii) non-officials such as local leaders and voluntary workers in the area of non-formal education, health and nutrition; and

iii) farmers and rural artisans.

The BARD programme is primarily aimed at training the functionaries of nation-building departments, orienting civil administrators to develop an understanding attitude towards rural problems, improving their motivation and inculcalating in the government administration a bias toward the welfare of the rural population.

The curriculum of the training programmes of the Academy includes information and analysis of administrative systems, use of technical knowledge available at the Thana level, training in co-operatives, agricultural credit, rural financing, rural education, rural sociology, psychology, communication, art, cottage industries and home economics. The training methods have been evolved empirically. Experimental projects accompanied by field survey, research and extension work were undertaken as a means of assuring realistic and effective techniques. The Academy experiments with different methods of transmitting ideas and information. In its training programmes audio-visual materials are used. Other methods used include lectures, discussion, practical work and field trips. Evaluation of training is done through supervision by Upa Zilla level experts who go to the field to observe the trainees and evaluate the impact of training. Action research i also tried out as one of the training methods for functionaries of the development agencies.

Students in institutions which train teachers for work in remote villages are trained in non-formal education, health nutrition and agriculture. They are a potential force for village level multi-disciplinary networks for rural development.

The Bangladesh Institute of Distance Education (BIDE) also trains teachers in home-economics, population education, practical arts and gardening. The method used is self auto-instructions using modular training materials.

INDIA

Functionaries for rural development in India are prepared at different levels and in different institutions. The aim of training is to give functionaries a sense of purpose, to promote extensive and broad-based development of initiative amongst beneficiaries and to generate self-confidence and belief in the efficacy of self-help. The primary objective is to replace bureaucratic rigidity by flexibility based on the need for the achievement of goals. The training aims at equipping workers with the capability to find solutions to problems rather than to evade them. Training is provided to functionaries of various development agencies so that they can develop an understanding of the aims of rural development.

There are rural development functionaries at various levels. At the lowest level the key functionary is the village level worker. His training and the training of his supervisor is pursued with a great deal of care and attention. The extension training centres started for this purpose provide the training. The training has a duration of 18 months of which one year is assigned for basic agriculture and six months for extension education. The women village level workers are given special training at home science training centres.

At the block level a new functionary, that of Social Education officer, is given training at selected regional centres. The Departments of Industries have extension officers (industries) who work with the people promoting cottage and small scale industries. Then there are other functionaries like rural overseer extension officers (co-operation) and block development officers. The Department of Health has its own training programme for the preparation of health workers. These training programmes do not have a mult-disciplinary orientation. The departments which conduct the training programme also has responsibility for the retraining programme.

Noteworthy contents of the training are communication for rural development, management of motivation, tribal life and culture, agrarian life and its economy and social defence. Whatever the training programme, communication science, motivation, human relations teaching methods and techniques are required ingredients.

Different methods are utilized for the training of rural development functionaries. The training methods normally followed are lectures, field work, group discussion, participant observation, practicum, syndicate sessions, panel discussion, lecture-cum-discussion, presentation of case studies, workshops and seminars.

In the formal education sector, there is no significant involvement of students and teachers in the programme of rural development. However, there are some educational institutions running on Gandhian lines which have a compulsory

programme of productive work and community service. In these institutions the students are given special training for undertaking programmes in community development. This training is given by schoolteachers and also specially invited functionaries from development departments. In the teacher education programmes, a compulsory component of the syllabus of the primary teachers training is community life. Through field work and community service the trainees develop an understanding of the modality of working with the community. The National Council of Teacher Education proposed a new training programme where 20 per cent of the time was to be devoted to work with the community. When this programme is fully implemented there will be a multi-disciplinary approach to the training of trainees which will improve the potentiality of the rural centres to associate actively in rural development programmes.

The non-formal education organizers have some training in understanding the problems of rural areas and rural education, co-ordinating the work of the rural developments functionaries of various departments and providing other services to the rural community.

There is a Universal Primary Education Programme (UPE) going on in India. There is special training for the teachers in UPE at the Indian Institute of Education, Pune. The Institute also has a programme for the training for supervisors. These training programmes have topics like economic problems of rural communities, establishing rapport with the community, undertaking field surveys and dealing with resistance.

Though one does not find a formal resolution about the nature of training programmes, it needs to be stressed that practically all training programmes in the area of rural development have varying degrees of multidisciplinary orientation. Either the training faculty is drawn from different disciplines or the trainees are drawn from different disciplines or the course content is multi-disciplinary in nature.

NEPAL

Multi-disciplinary rural development projects in Nepal are the Primary Education Project and Education for Rural Development in the setizone.

The potential for guiding multi-disciplinary team training is shown in structures for supervision of these projects as exemplified by "resource centres" and satellite schools. Training of teachers and other personnel is considered the heart of the project. The programme consists of 12 day's training for teachers and headmaster, followed by two days training for the Chairman of the school management committee and the headmaster. There is a 35 days training programme for adult education teachers with an emphasis on rural development work.

Short term programmes are included. These provide a ten month training course for primary teachers. One month of this is spent in teaching adults within the framework of community development. A three month practical course in one development skill such as primary health care or agriculture is also included.

For training methods guided discussions followed by individual or group assignments and practical activity is common. For longer training courses some constructive rural development activity (village cleaning or tree planting) is included.

Every training programme will produce a training manual which gives instructions to trainers in running each session as well as providing teaching material for the trainers. This provision facilitates replication of the project.

At the university level there is much potential for involving graduates or students on internship in multi-disciplinary training teams. At Tribhuvan University there are different institutes related to rural development concepts. This is true for the Institutes of Education, Engineering, Agriculture and Animal Science, Forestry, Medicine, Applied Science and Technology and Management. The Trade and Technical Schools are also playing vital roles in rural development through inservice trade training. The pre-service training in these institutes are requirements for graduation and are of high quality.

PAKISTAN

Allama Iqbal Open University employs a distance teaching methodology for its Basic Functional Education Programme in rural areas by:

1. Centrally developing appropriate learning packages primarily consisting of cassettes and flip charts in the light of needs assessment surveys that are carried out in sampled areas representing each provinces.

2. Involving the Nation Building Departments (NBDs) not only in the development of these learning packages but also in the out-reach system that is, the launching of these courses in larger and larger number of villages in remote areas.

3. Training not only the personnel of different NBD's but also village leaders who are elected by the learners themselves.

4. Evolving an effective "train the trainers" approach throughout its training programme.

The group leaders in the village play a key role in the outreach system. They are responsible for ensuring the learners attend each course meeting, the course materials are well presented, and the learners make use of them through discussions and follow-up activities. For this reason, it is essential that group leaders be well trained and responsibility for this rests with the master trainers.

For training of master trainers, group leaders and learners, the method of cassette and flip charts is used, in spite of the fact that this technique is chosen because of its appropriateness for teaching the non-literate groups of villagers. The university believes that the master trainers can only teach others how to use this method when they themselves learn the same way.

Besides development of sets of cassettes and flipcharts for training the master trainers, detailed manuals of training have been developed by the university.

The contents of this training material generally consists of the specific tasks which the master trainers have to perform sequentially. These relate to (a) the preparatory work before the start of a course concerning matters like setting up the local training centres, individual course sessions, materials and equipment needed and notifying the trainees; and (b) each day of the session in terms of what they have to do before during and after each session.

During training sessions for these master trainers simulated groups of learners are used. They demonstrate and practice their training skills. (Although the university started the Basic Functional Education programme without any literacy component and the illiterates were given courses in areas like child health nutrition, electricity, poultry, agricultural and credit, these courses seemed to create a thirst for knowledge. Not only are new courses being demanded but the AIOU is also planning to blend its literacy programme with its Basic Functional Education Programme). These master trainers, supervisors, assistant supervisors and group leaders, do not give any lectures in their training sessions. Rather they learn how to play the tape and let the learners listen to the teachers, experts and the experiences of their fellow villagers recorded on the tapes and then engage learners in discussions. They develop skills like how to conduct sessions, arrange demonstrations and make use of the visual and other material. The university has so far run a number of such training programmes for a variety of Basic Functional Courses including the Child Health, Boultry, Agriculture Credit, Electricity and Livestock.

Evaluation of these training sessions is carried out with the help of different forms that are filled out during each session by trainees. These give information about the performance of a learner group as a whole and of its individual participants. These are simple visual sheets on which, for example, the group leader by marking inputs in front of each drawn figure can easily indicate which member of the group took part in discussion and how many times. This is besides the evaluation that is carried out before and after each session. After the completion of the course a field survey is done to judge if what is learned is used by the learners in their real life situations.

PHILIPPINES

Multi-disciplinary team training began in 1983 when a field Operational Seminar was held in Baguio city with eight village leaders, 12 representatives from government ministries and bureaus and four education personnel, including the universities. The content of training at the seminar included:

i) planning, implementation and evaluation of rural development projects;

ii) deriving plans from real-life problems through situational analysis to ensure relevence to the environment, needs, values and priorities of the people; and

iii) deriving model strategies for integrated rural development with emphasis on collaboration among representatives of the different functionaries and village leaders.

For methods of training the activities are:

i) exchange and sharing of experiences;

ii) discussion of research problems and needs related to educational components;

iii) roles and responsibilities of each Ministry or discipline;

iv) presentation and discussion of problems in rural development as experienced by village leaders;

v) model – making, a strategy for integration of rural development;

vi) observation of real-life situations through an in-depth community survey, including making profiles of communities, designing of data gathering instruments, community immersion and data analysis; and

vii) evaluating the seminar.

Evaluation of the seminar uses an evaluation guide in which participants rate clarity of objectiveness, content and subject matter, mechanics of work, output, physical facilities and human values developed. The overall implementation of the plans made by the multi-disciplinary team and the village members has yet to be evaluated.

Transfer of the technology and method used in the seminar was envisioned. Thirteen workshops on the self-Reliant Home Movement (SRHM) programme were held across the country in 1984 under the leadership of the Bureau of Continuing Education and its network of supervisors and school co-ordinators. The subject matter of the workshop is multi-disciplinary. It included the seven household technologies that make for a self-reliant home.

In the each of 13 workshops, government functionaries, education personnel, village leaders and civic organizations were involved in planning projects on house-hold technologies.

Content of the workshops included:

i) planning projects on the technologies;

ii) roles and responsibilities of the represented functionaries;

iii) community surveys;

iv) evaluation of the workshop; and

v) monitoring and evaluation of projects.

Training methods include plenary sessions, small group discussion, exhibits, demonstration of technologies, lectures, community surveys, field trips and observation and preparation of evaluation instruments.

At present, monitoring and evaluation of the SRHM programmes is being undertaken. Already 60 per cent of the projects have been visited and evaluated. An evaluation guide was prepared. It determined the participation and involvement of the multidisciplinary sectors in the planning and implementation of the rural development projects. Interviews with the village members were conducted to determine their level of satisfaction and the lessons that they learned from co-operation with others.

REPUBLIC OF KOREA

In its efforts to develop rural areas, the Republic of Korea has been carrying out SAEMAUL UNDONG which is based on the philisophy that change should be a holistic process. In the case of rural development there should be a change in the values of people, strengthening of community organisation and village economic life. The most important resource in this concept is people. Thus, SAEMAUL UNDONG is concerned with:

i) motivation of people;

ii) community participation in rural development, and

iii) government support for projects which are multidisciplinary in nature.

The content of training in SAEMAUL UNDONG is drawn from its philosophy and includes:

i) self-reliance, diligence, discipline and co-operation and includes cultural and spiritual development;

ii) farm technology including agricultural co-operatives;

iii) successful case studies by farmers and other village workers; and

iv) subjects of interest for rural people like kitchen improvement, nutrition, dress-making and store keeping.

Content differs from programme to programme. There are courses for advanced farmers in which the content differs from that used in the teachers' training. There is, however, emphasis on SAEMAUL spiritual development which includes diligence, self-help and co-operation.

The training method is basically that of learning by doing. In most cases audio-visual techniques are utilized in the relating of success stories by learners themselves. Generally the training methods are non-formal using small groups discussions and problem solving techniques. Co-operation is fostered by making learners live and work together in humble and frugal ways.

Evaluation is one of the functions of SAEMAUL UNDONG training programmes and graduates write letters relating their experiences on village projects. Trainers also visit the houses of graduates to assess whether the training programmes have had any impact on the quality of that lives.

Research was undertaken to determine the factors that effected the impact of training. They were classified as either (a) essential or (b) accelerations. Essential factors included the use of success stories as examples and the enthusiasm of the trainers. Among the accelerators were the special benefits to trainers, guarantees of finance and follow-up of graduates.

THAILAND

Rural development is a major commitment of the Government of Thailand and many agencies are involved. Each agency trains its own personnel to implement the programmes. However, the major responsibility is assigned to the Department of Community Development of the Ministry of the Interior. The various departments whose programmes directly support the community development programme are the Departments of Agriculture, Health, Education, Local Administration and Soil Development. There are certain organisations specially established for urgent rural development in strategic areas, for instance, the Accelerated Rural Development Programme.

The objectives of the training programmes of the various departments are broadly:

i) to provide broad knowledge and understanding of community development, principles and methods;

ii) provide knowledge on various subjects related to their work;

iii) provide skills in working with people;

iv) create attitudes for working effectively with colleagues and other development agencies; and

v) create in trainees self-confidence and work ethics.

Training programmes for rural development are found in formal as well as non-formal centres of education. The clients of the programmes include community members, village chiefs and members of local councils. The programmes have a multidisciplinary orientation.

The content of the training programmes includes formal and non-formal educational concepts, new approaches to community development, government plans for the rural people, in-country and out-of-country experiences in rural development, physical exercises and meditation. There is a special programme for the training of local leaders. The content of such a training programme includes basic knowledge for rural development (40 per cent), character improvement (20 per

cent) and techniques for developing the rural community (40 per cent). The package of basic knowledge deals with community problems, factors obstructing development and solutions to such problems, provision of basic facilities in rural communities and rural development evaluation. In character formation are included physical exercises, meditation, rural development ideology, human relations, group processes and group techniques. In methods and techniques of rural development, the following topics are included:

- techniques for conducting meetings and small groups discussion;
- development of operational plans for local leaders;
- encouraging inter-learner interactions;
- case-studies of successful programmes;
- the successful rural development functionary, his style of work; and
- study of successful projects and discussion to identify their strong points.

In Thailand, clusters of teachers training colleges cousortium work for community development in the nearby villages. These consortium are the focal points of networking of expertise from the universities and other colleges. The training of the students of teachers colleges is often multi-disciplinary. The professors of various faculties like the Faculties of Pharmacy, Nursing and Engineering involve themselves in the training of the student teachers.

To evaluate the pre-service training programmes for rural development, an evaluation project was planned from the inception of the programme to determine it's progress in meeting the stated objectives. The results of evaluation are used to modify the training programmes.

Implications and suggested approaches

The training programmes and strategies of the eight participating countries have a number of common factors as well as factors which are specific to each country.

The training programmes are undertaken in both formal as well as non-formal sectors in almost all countries of the region. The formal government agencies are found to be playing a more dominant role in the agriculture, health, co-operative, afforestation programmes as compared to non-formal private agencies. The non-formal and voluntary agencies actively collaborate with governmental efforts and their participation has a qualitative impact on developmental activities. An important concomitant outcome is the expanding base of attitudinal change amongst the people working for programmes of rural reconstruction.

In all the countries, the training programmes are varied. This variety of programmes is characterized by innovative training structures and their modalities

of operation. These innovative features are seen in (i) the pre-service training programmes of agricultural graduates with a multidisciplinary rural development perspective of Hawkesbury Agricultural College in Australia; (ii) the training programmes of the Bangladesh Academy of Rural Development in Bangladesh; (iii) the training programmes of multidisciplinary nature planned by the Indian Institute of Education, Pune; (iv) the 'resource centres' of Nepal; (v) the Allama Iqbal Open University in Pakistan; (vi) the training workshops on the 'Self Reliant Home Movement (SRHM) programme of the Philippines; (vii) the Saemaul Undong leadership training of the Republic of Korea; and (viii) the training of local leaders at the grass roots level in Thailand. These training programmes are organized by different agencies like education, health, agriculture and rural development. The innovative strategies revealed through the analysis of training programmes are (i) learning by doing and internship through the co-operation of a farmer in the training programmes of Hawkesbury Agricultural College in Australia; (ii) research-based methods of training in Bangladesh; (iii) planned efforts at building local leadership through a multi-disciplinary team approach by the Indian Institute of Education, Pune, India; (iv) the emphasis on practical work in the training programmes in Nepal; (v) the distance learning technique planned and used in Pakistan; (vi) field operational seminar modality used in the Philippines; (vii) emphasis on learning by doing and use of non-formal training methods using small group discussions and problem-solving techniques in the Republic of Korea; and (viii) use of case studies of successful programmes and successful rural development functionaries in Thailand. Some of the outstanding features of the training programmes emerging out of an in-depth analysis are the value orientation in the programmes in the Philippines, the technology orientation of the delivery methods in Pakistan, the process oriented training methods in Australia, attitudial change and movivation oriented programmes of the Republic of Korea and Thailand, and significant emphasis on multi-disciplinary content and approach in India, Nepal and Bangladesh.

The reports of eight countries provide new directions to the training of multi-disciplinary educational teams for rural development in the region. These directions are:

1. In a multi-disciplinary approach to training, the trainees may belong to different disciplines and/or the training curriculum have topics from different disciplines. All the two conditions or any one of them may occur simultaneously. This approach is essential because of the multi-dimentional nature of the rural development programme.

2. The training programmes should have an in-built component of research in them. A planned programme of research in training curriculum, training methods and impact evaluation are necessary inputs to keep training tuned to the requirements of rural development programmes.

3. Action research is an effective modality for providing a multi-disciplinary forum for rural development efforts. It is through action research that problems confronting rural development programmes are experienced. This leads to efforts at innovative solution. Allama Iqbal Open University's innovative approach,

non-formal programme for rural development in India and efforts of Udornthani Teachers' College for rural development are some examples of action research programme.

4. Effective training programmes should focus on 'motivation of people, community participation, self-reliance, diligence and cultural development (Saemaul Undong-model of Republic of Korea). The programmes require value orientation, attitudinal change and community participation for rural development.

The strategy for training emphasized by most of countries is to train trainers, who would train the field-workers, who in their turn may train the local leaders or work directly with the community. This was noted as an important strategy to trigger multiplier effect.

Chapter Five

EVALUATING TRAINING

The Workshop identified three major questions on evaluation of training: (i) evaluating the training programme; (ii) evaluating the training objectives; and (iii) evaluating the participants. Strategies for evaluation of training relating to the above three major questions were discussed intensively.

Evaluating the training programme

For evaluating the training programme the basic question is, to what extent did the programme achieve what it set out to achieve? It is, overall, the same question that trainers ask of every session, block, and part of the programme. That is, the programme started with a set of objectives: that, when it is over, the participant should know X, be able to do Y to Z standard, have developed an outlook A. Now that it is over, to what extent has the programme in fact succeeded in these terms, and how far does the participant actually behave differently at work? Evaluation at the very end of the programme tells about the new knowledge, understanding, and skill that the participant has gained during training. The same kind of data at various stages of the training phase must show how stable these gains are and to what extent they have survived transfer to the work situation.

The workshop examined sample evaluation form developed by Udornthani Teachers' College, Thailand. This questionnaire was previously used for evaluating the training programme undertaken by the teachers' college consortium in the Northeastern region of Thailand (The questionnaires were sent to educational administrators, educational supervisors, programme trainers, programme trainees and other related personnel so as to get their responses for rating the effectiveness of training).

Evaluating the training objectives

If the training programme is to be effective, the objectives of the training must be formulated clearly. To increase effectiveness of different inputs and sequences of the training programme, pre- and post evaluation may have to be undertaken.

Where overall policy is realistic and clear regular and frequent evaluations followed by marginal adjustments would keep training objectives in tune with shifting needs. This assumes a close relationship between the training institutions and multi-disciplinary training team.

Table 2. Four main questions for evaluating training

Purpose	*What?*	*When?*	*How?*	*Who Evaluates?*
Training to help change of the programme	Training objectives	Once every two or three weeks		Multidisciplinary training team and affiliated institution
. *Evaluating the training programme*				
a) To improve the effectiveness of the programme as a whole	Contents and methods, including timing and sequences of training inputs	At end of programme and again at regular intervals after training	Generally available tools chosen in terms of training objectives of programme	Multidisciplinary training teams with the help of participants and their affiliated institutions
b) To increase effectiveness of different inputs and sequences of the training	Content and methods	Before and after inputs to be evaluated	Specially designed tools, assignments, etc.	Participants and trainers
c) To give the participants effective feedback to help them improve	Participants' attitudes and behaviour	Regularly during training	Tests, assignments, questionnaires, field observation	Trainers and participants
d) To improve the trainers' contribution	Trainer behaviour and its effects	Regularly	Content analysis	Trainer with the help of colleagues and participants
I. *Evaluating the training objectives*	Participants' behaviour on the job	Regularly for set period after training	Interaction analysis; output, etc.; observation of participant and colleagues	Multidisciplinary training team with the help of participants and their affiliated institutions

The burden of drastic changes would be extra heavy for developing countries: changing tasks, changing situations, and changing divisions of functions. Training needs there are especially difficult to define and then to keep up to date and embodied in organizational policies. In that situation, well-designed and operated evaluation procedures are particularly important, to help bridge the gaps that surely occur between needs and policies and between training objectives and training needs.

It was noted that the evaluation proforma may have to be developed with reference to the objectives of the workshop. Evaluation is to be done in phases, one phase covering one objective. It was suggested that at the end there should be overall evaluation of the workshop.

The daily timetable of the workshop, therefore, has to be planned in a manner that facilitates evaluation in phases (see table 3).

Table 3. Questionnaire used for improvement of the effectiveness of the training programme by teachers' college consortium in the Northeastern region of Thailand.

Aspect and questions	*Assessing effectiveness*						
	much	*5*	*4*	*3*	*2*	*1*	*less*
Objectives of the CBTTP*							
1. Relevance of the objectives to the needs of the trainees.							
2. Specificity and clarity of the objectives in relation to the trainees' real work.							
3. Specificity and clarity of the objectives in relation to teaching improvement.							
4. Ability of the objectives to promote the capabilities of the trainees.							
5. Relation of the objectives to present rural development.							
Contents of the training							
6. The contents and the curriculum are consistent with the objectives.							
7. In general, the contents and the curriculum are consistent with the trainees' ability.							
8. The contents of training are responding to the needs for the development of primary schools.							
9. The contents of training are consistent with the development of community education.							
10. The contents are subject matter centered.							
Procedures and methodogies of the CBTTP.							
11. The trainers rely mainly on lectures.							
12. Trainees depend mainly on independent study.							

* Community based Teacher Training Programmes for educational personnel towards rural development.

Table 3 *(continued)*

Aspect and questions	*Assessing effectiveness* much 5	4	3	2	1 less
13. Multi-media of training are so frequently used that it is least necessary for the trainees to meet the trainers.					
14. Lectures and media are equally used.					
15. The methodology of training is applicable in the actual situation in primary schools.					
16. The training creates learning motivation.					
17. The trainees are free to learn according to their individual and group interest.					
18. Full utilization of local resources.					
19. Teaching and learning materials are adequate in this programme.					
Measurement and evaluation in the Training					
20. Tests and measurement are consistent with the objectives of training programme.					
21. The trainee and the trainer both take part in evaluation.					
22. Evaluation covers the contents of the subject.					
23. The trainees' progress is followed up at intervals.					
24. Tests and tools of measurement and evaluation are valid and reliable.					
25. Evaluation motivates self-improvement of the trainers and trainees.					
26. The trainees who have completed the course of training yield more effective performance.					
CBTTP administration					
27. The administration enhances motives of all concerned agencies.					
28. Planning of implementation is carried out jointly by concerned agencies.					
29. The budget for the training is adequate.					
30. Orders and assignments in administration generally are from the central organization.					
31. The duration of training is suitable.					
32. Selection of trainees is suitable.					
33. Local educational resources such as building and personnel have been utilized to their maximum capacity.					
34. Co-operation in implementation among concerned agencies is effective.					
35. Other primary school teachers want to enter this programme.					
36. Capable trainers have the opportunity to join the programme.					
37. Equal opportunity of entering to the programme is given to all rural teachers.					
38. Trainers have taken part in making suggestions for the development of the programme.					

Table 3 *(continued)*

Aspect and questions	*Assessing effectiveness*						
	much	*5*	*4*	*3*	*2*	*1*	*less*
Development of CBTTP							
39. Survey and studies have been made in order to develop the training work.							
40. Short training courses are offered to upgrade and update the trainers.							
41. The training is developed continuously.							
42. Other personnel have opportunities to supervise the training.							
43. There have been study visits to the training sites.							
44. Trainees are supervised.							

Table 4. Letters and rating forms for evaluating trainers

Rating Form A

How do you perceive yourself, your skills, your relationships, etc., before and after the programme? Put on the ladders *b* for *before* (where you thought you were) and *a* for *after*: 1 is the lowest, and 10 the highest. Your responses will show whether you moved up or down.

1. Satisfaction with your role as a trainer.	2. Effectiveness in your role as a trainer.	3. Skill in working with others.
10	10	10
9	9	9
8	8	8
7	7	7
6	6	6
5	5	5
4	4	4
3	3	3
2	2	2
1	1	1

4. Relationship with your colleagues who did not go to the programme.	5. Relationship with those who went to the programme.	6. Understanding of colleagues.
10	10	10
9	9	9
8	8	8
7	7	7
6	6	6
5	5	5
4	4	4
3	3	3
2	2	2
1	1	1

Table 4 *(continued)*

7. Behaviour with participants.	8. Understanding of self.	9. Behaviour with family and friends.
10	10	10
9	9	9
8	8	8
7	7	7
6	6	6
5	5	5
4	4	4
3	3	3
2	2	2
1	1	1

Source: Siet Institute, Hyderabad, India

Table 5. Suggested evaluation proforma

1. Title of the workshop	_____
2. Name of the participant	_____
3. Date	_____
4. Session	Morning/Evening
5. Objective discussed/Activity undertaken in the session	_____
6. Please write down the problems of education in rural development that were discussed in the session.	I. II. III.
7. Please write down the problems of education in rural development you find in your own locality.	I. II. III.
8. Please write down the prospects of education in rural development discussed in the session.	I. II. III.
9. Please write down the prospects of education in rural development in your locality.	I. II. III. IV.

Table 5 *(continued)*

10. What new insight did you get about the problems of education in rural development by attending the session?	I.
	II.
	III.
	IV.
11. What new insight did you get about the prospects of education in rural development by attending the session?	I.
	II.
	III.
	IV.
12. Please state your views further, if any, on the subject.	

Note: For each of the objective, a separate evaluation proforma may be prepared on the above lines.

Evaluating the participants

With training objectives formulated clearly in terms of changes to be effected at work, multi-disciplinary training team might be in the best position also to evaluate the effects of training on individual participants. The question remains, what is such evaluation for? The training team may use it for the same legitimate purposes that the institution used it for during the training programme; to provide participants and trainers with information about progress toward various training objectives and about any difficulties that require attention on the way. This involves feeding the evaluation results in the first place back to the participants, and proceeding to any subsequent action with their agreement. An increasing number of the training team have set up individual evaluation procedures for these purposes and in this manner, merit rating schemes, for instance. For these purposes the multi-disciplinary training team should develop regular and rigorous procedures for collecting data from the participants and from their superiors, colleagues, and subordinates. It should also help in analyzing the results.

Chapter Six

SUGGESTIONS FOR FOLLOW-UP

The participants suggested a range of activities that might be initiated as a appropriate follow-up activities to the workshop.

1. **Follow-up action in each country.**

   a) The participants on return to their countries may bring to the notice of their governments the outcome of the workshop. They could emphasise the implications for rural development projects of adoption or adaptation of methods for :

      i) Formulation of appropriate multi-disciplinary networks to facilitate smooth, effective and mutually reinforcing working relationships among the agencies and personnel involved in multi-disciplinary educational teams for rural development.

      ii) Pursuit of a multi-disciplinary approach for training and retraining of multi-disciplinary personnel engaged in different agencies for purposes of rural development.

      iii) Design and development of collaborative field projects which may involve two or three related agencies or organisations and personnel at different levels.

   b) The participants on their return to their countries could take steps that may lead to the following:

      i) Development and compilation of portfolios of training programmes of different Nation-Building Departments, including Education, indicating the type of persons being trained, the agencies which they represent and the nature of content of the programmes.

      ii) Development and compilation of detailed case studies of selected training programmes of an inter-disciplinary nature with an emphasis on the way the programmes are designed and developed along with the points mentioned in b(i) above. At least two case studies are recommended, one relating to a training program of a Nation-Building Department with the involvement of the Education Department and the other of a programme run by the Education Department and involving trainees from Nation Building Departments.

      iii) Development of an inventory of the professionals who work in different agencies and organizations who could be brought together

to form meaningful inter/multi-disciplinary team for rural development.

iv) Identification of suitable topics and initiation of research that reveals and points to ways of overcoming factors that impede the growth of appropriate multi-disciplinary networks and effective interpersonal relationships among the members of multi-disciplinary educational teams working for rural development. The research projects should relate to the socio-cultural context of each country and fit into their institutional and administrative frame works.

v) Allocation to and acceptance of research projects in (iv) above by suitable national or provincial universities.

vi) Organisation of national workshops with similar aims to this or , in collaboration with one of the associated centres of APEID, at which the participants of the present workshop may act as resource persons.

vii) Development of cohesive national papers in the light of insights the participants developed in this workshop.

2. Role of Unesco Regional Office

The Unesco Regional Office, Bangkok, Thailand can play an important role and act as a resource centre for member countries by providing the following services.

i) Pool the reports of various activities in different countries and disseminate information to all member countries;

ii) arrange for exchange of experts from one country to another for mutual benefit;

iii) arrange for internship/attachment of field workers in other countries to gain from experience of their on-going projects;

iv) arrange for exchange of instructional materials and tools between the member countries; and

v) arrange for periodical meetings of participants for discussion of progress in their countries, difficulties encountered, problems faced and solutions generated.

Annex I

AGENDA

1. Opening of the Meeting.

2. Election of Officers of the Meeting and consideration of Agenda and the Provisional Schedule of Work.

3. Presentation and discussion of the country experiences on:

   (a) A review of the existing arrangement and relationship among multidisciplinary educational groups and institutions engaged in rural development projects (with an emphasis on education).

   (b) A review of existing structures and training programs and identification of the training and retraining needs of multidisciplinary teams in rural areas.

   (c) Identification of innovative strategies of training (including content) either built into or supplementary to the rural development projects.

   (d) A review of the role played by the identified training and professional support structures (i) in training, and (ii) staff development and professional support.

4. Proposals for alternative feasible strategies and programmes for training and retraining of staff of multidisciplinary educational teams for rural development.

5. Explanation of mechanisms and programmes for promoting networking of institutions involved in (i) training, and (ii) professional support programmes.

6. Closing of the Meeting.

Annex II

LIST OF PARTICIPANTS

Bangladesh	Mr. Md Nurul Alam Principal Teachers' Training College Chittagong
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Thailand	Dr. Supol Wuthisen Instructor Udornthani Teachers College Department of Teacher Education Udornthani, 41000.

Resource Persons

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UNESCO Regional Office for Education in Asia and the Pacific

H.K. Paik
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(ACEID)

Annex III

LIST OF DOCUMENTS

General Information	
ROEAP-85/APEID.RW/INF.1	General Information Paper
ROEAP-85/APEID.RW/INF.2	List of participants
Working Documents	
ROEAP-85/APEID.RW/WD.1	Agenda
ROEAP-85/APEID.RW/WD.2	Provisional Schedule of work
ROEAP-85/APEID.RW/WD.3	Discussion paper on Training of multidisciplinary educational teams for rural development by Mr. Md Nural Alam (Bangladesh)
ROEAP-85/APEID.RW/WD.4	Strategies and alternative methods for pre-service and in-service training of members of multidisciplinary educational teams in rural areas and for networking of experiments in relating rural education to emerging needs by Dr. B.S. Gupta (India)
ROEAP-85/APEID.RW/WD.5	Building multidisciplinary training networks for rural education and development : An Indian Perspective by Dr. Chitra Naik (India)
ROEAP-85/APEID.RW/WD.6	Country experiences on Training of multidisciplinary educational teams for rural development by Mr. Virendra Kumar Singh (Nepal)
ROEAP-85/APEID.RW/WD.7	Country experiences on Training of multidisciplinary educational teams for rural development by Prof. Javaid Iqbal Syed (Pakistan)
ROEAP-85/APEID.RW/WD.8	Development of strategies and programming for training multidisciplinary teams for rural areas by Dr. Lourdes Sumagaysay (Philippines)
ROEAP-85/APEID.RW/WD.9	A paper on pre-service and in-service training of members of multidisciplinary educational teams in rural areas by Dr. Mukeun Lee (Republic of Korea)

ROEAP-85/APEID.RW/WD.10	Discussion paper on Regional network on multi-disciplinary approaches for rural development among the educational institute – care of the northeastern Thailand by Dr. Supol Wuthisen (Thailand)
ROEAP-85/APEID.RW/WD.11	A study on the Regional Education network for implementing innovative project in rural development by Dr. Supol Wuthisen (Thailand)

Annex IV

SUMMARY OF COUNTRY EXPERIENCES

BANGLADESH

Bangladesh has a population of about 95 millions and most people live in villages and are engaged in agriculture. Bangladesh has a wide range of institutions and agencies and rural people are greatly influenced by them. Any rural development project must have support from these institutions and from rural people.

Since the early 1960 attempts have been made to improve the quality and quantity of human potential so that instead of becoming a burden to society the huge population will be a strong and viable resource for rural development. The Government through its various agencies and institutions, and other non-government and foreign agencies, has been working in different sectors to bring about human development in the rural areas. Different multidisciplinary teams are involved in training.

Education Department. Several universities are educating the younger generations so they understand national problems and are equipped to face them successfully. Several Medical Colleges produce doctors to take care of rural health. Posting of doctors in rural clinics has been made compulsory. Hundreds of general colleges are preparing the young for higher education. Most of these colleges are located in the rural areas and arranged by community leaders with little or no help from the government. Thousands of government and non-government secondary schools are engaged in guiding the boys and girls to face the future effectively. Primary education has been nationalized.

Teachers Training Colleges and Institutions are responsible for preparing the teachers of secondary and primary schools to discharge their responsibility for rural development. Madrashas, which formally were engaged only in religious education, have recently been reformed with modern science education to train the rural religious teachers.

Under the Education Department many other training organizations are working with the ultimate goal of rural development:

NIEAR (National Institute of Educational Administration and Research) conducts in-service, pre-service and short-course training for teachers and educational administrations. It also conducts research for the improvement of teaching, evaluation, administration and curriculum.

NAPE (National Academy for Primary Education) is located in a rural area and conducting similar activities to those of the NIEAR but exclusively in the area of elementary and primary education. It is also engaged in exploring methods of locally made low cost teaching aids.

NCTB (National Curriculam and Textbook Board) prepares the national curriculum up to higher secondary level.

BISE (Boards of Intermediate and Secondary Education) conducts examinations and accredits secondary and higher secondary schools.

UPE (Universal Primary Education Programme) is executing the government policy of making primary education compulsory by 1987.

CLC (The Community Learning Centre Programmes) has taken up some projects in schools for executing the idea of learning by doing with the active co-operation of the local community.

BEEB (Bangladesh Educational Equipment Board) supplies low-cost educational equipment to schools and colleges. It also helps develop methods of raising such low cost equipment locally.

BIDE (Bangladesh Institute of Distance Education) has from July, 1985 started a project to train rural teachers in-service through a distance education system under the academic umbrella of Rajshahi University.

All these organisations have been working in their respective areas with the Education Department co-ordinating their activity.

Agriculture Department. There are an agricultural university and many other agriculture colleges where agricultural knowledge is imparted to young people. Some subordinate directorates of this Department are training local agriculturists to acquaint them with modern agricultural techniques. This Department also has field staff who train the farmers.

Health Ministry. This Ministry trains doctors and nurses to work in rural areas and has made their service in a rural area for 3 years compulsory. Unofficial village "doctors" are also trained. The Family Planning Directorate within the Ministry has the responsibility for population control programmes. It has active workers down to the village level. Continuous training is provided for them.

Ministry of Local Government and Co-operatives. This Ministry maintains a widely spread network of co-operative societies and trains functionaries. Union Parishad, Upa Zilla Parishad and Zilla Parishad are engaged in different works of rural development. Some other institutions under this Department like BARD (Bangladesh Academy for Rural Development) at Comilla, BARD at Bogra, LGI Dhaka, RDT Sylhet are conducting action-research projects for rural development in Bangladesh. BARD is also conducting in-service and pre-service training of the officers and workers of all the functionaries of the government (but with few trainees from the Education Department).

The Ministry of Women Affairs and Youth Development trains women and unemployed young people and prepares them for work in rural areas.

Functionaries of all these Departments train artisans, farmers and local leaders. One of the most effective training agencies is at the Upa Zilla level where

the Upa Zilla Parishad conducts training for functionaries and experts from all Departments.

Though these multidisciplinary training teams do not clash with each other while working in the field of rural development, there is a chance of overlapping and undue interference which may create misunderstanding among its members since the field of work is the same. Therefore, the network of training by these multidisciplinary teams in rural areas in Bangladesh has to be reformed.

An important role in intergrated rural development is being played by the workers of the Education Department. Teachers and workers trained by this department are utilised by other functionaries to get popular support from the rural community. Without teachers' active support, co-operation and participation in rural development with any agency is unthinkable.

INDIA

Training of educational functionaries in relation to out-of-school action for improving the quality of life of the community is not a new idea. It arose out of two major concerns, (a) preventing the isolation of the school from the community by setting in motion interaction between the knowledge transmitted in school and traditional knowledge, and (b) attracting community resources for improving the material conditions of the school.

The principles of generating community awareness of problems and encouraging community participation in socio-economic development got recognition and emphasis in the Community Development Movement started in the Second Five Year Plan. Decentralization of administration and programmes of community education were made a reality by establishing a development block for a population of about 70,000 to 100,000. The block administration, headed by the Block Development Officer and supported by a team of extension officers from Agriculture, Co-operation, Industry, Education, social education officers and so on, sought to reach the community members through short training courses, seminars, training camps, guidance to small groups and even to individual farmers and artisans. The school, co-operative and Panchayat (a council of villagers to look after the needs of their own village and its satellite hamlets) were looked upon as a sort of 'troika' to pull the chariot of development. The arrangement, however, did not work. The 'troika' failed to pull together. The school remained inflexible. Lack of education of the members made co-operatives unstable. The panchayat, however, continued to be fairly flexible and purposeful. However, the enthusiasm initially generated by the Community Development Movement gradually petered out. But the Block Development Officer and the machinery of dacentralized administration has survived. The principle of decentralized, participatory action has also sunk into planning and administrative thought. Still, participation in the effective sense has not yet emerged and development has not gathered the expected momentum.

There is a growing feeling that non-formal education is a necessity for (a) keeping up flows of development information to the people, (b) changing the

self-definition of the communities from 'recipients' of development to 'makers' of development, and (c) counteracting the enervating and demoralizing impact of formal education. In most of the new development programmes, therefore, the non-formal education component figures prominently.

The various development departments like Agriculture, Rural Development, Education and Health have a large number of training programmes which have elements of non-formal education and require multidisciplinary teams of functionaries.

The non-formal education structures have a sizeable programme of training. They train project officers, supervisors of non-formal/adult education centres and plan training programmes for instructors at the grass roots level. The training programmes for the supervisors of non-formal education centres include topics like economic problems of rural communities, cultural handicaps to learning and group dynamics. These programmes prepare the ground for multidisciplinary teams of trainers.

The various structures and programmes where multidisciplinary groups participate are Nehru Yuvak Kendras and training of their functionaries; Krishi Vignen Kendras and training of their functionaries; the Integrated Child Development scheme and training of the it's field workers; training of agricultural extension and health workers, secretaries of 'gram panchayats' and others.

These training programmes use group and discussion methods and are activity centred and the training programmes that have evolved require an interdisciplinary approach. The Universal Primary Education Project of the Indian Institute of Education at Pune has the following topics in its training programme for part-time teachers:

i) the way adults develop and learn – participatory methods – dialogue;

ii) co-operation with the community including dealing with opposition and organising, social and cultural activities;

iii) innovating while working, teaching and learning.

In the formal sector, the National Council of Teacher Education has recommended a new syllabus of teacher education which provides for 'work with the community' as a required paper. Through this programme teachers have an opportunity to associate with programmes of rural development. The teachers are supported by sub-inspectors of schools, block education officers, district education officers and training colleges.

In addition to the operational staff, there are educational teams in the background preparing the field staff. These background teams consist of staff of Teacher Training Institutions in Districts, State Institutes of Education, State Council of Educational Research and Training, State Institute of Educational Research and Training, State Institutes of Science Education at state level and the National Council of Educational Research and Training at the national level. These organisations

are responsible for pre-service and in-service training of members of educational teams as well as curriculum development, development of instructional material and innovation and experimentation in education. These agencies function in close co-operation with each other. Generally the areas of co-operation are in developing instructional material, training programmes and research in education.

NEPAL

Nepal is predominantly an agricultural country and 94 per cent of its population live in villages. Agriculture is the most important sector in terms of income and employment. About 65 per cent of the total Gross Domestic Product is contributed by the sector while 93 per cent of the total labour force is employed in agriculture. In recognition of this fact Nepal has, during the past few years, initiated various schemes in education for rural development.

In the 1970s there was a watershed in educational development. After much deliveration the National Education System Plan (NESP 1971-1976) was introduced. The objective of this programme is to make education development – oriented and contributory to the society.

There are various agencies working for the amelioration of the condition of rural people. There are the locally elected people who are working in development activities from the village level at the bottom to the national level at the top. But national resources in terms of skilled manpower, materials, finance and communication facilities are limited and the rough mountainous terrain of the country inhibits the rate of progress. There are several government or semi-government agencies that are providing services to rural people in areas such as health, agriculture, women's training, family planning, non-formal education and cottage industries.

Non-formal education-formal education

Multidisciplinary teams working in rural area are as follows:

Government agencies. Ministry of Education, district education officers, school supervisors, field-co-ordinators, resource persons, adult education supervisors help in the formal and non-formal educational activities in the district.

School Teachers and Instructors conduct formal classes. Some of these also work as adult education teachers.

Ministry of Health, health assistants and village level health workers conduct family planning and mother and child health programmes through the functional literacy program.

The Ministry of Local Development, Women's Development section carries out a number of programmes, including functional literacy classes.

The Ministry of Agriculture, conducts extension work and is involved in the functional literacy programme.

Semi-government organizations. Agricultural Development Banks have incorporated functional literacy classes into the small farmers development programme. The Rastriya Banijya Bank participates in the functional literacy programme with the help of Bank staff. The Family Planning Association is conducting other activities and functional literacy classes as well as family planning.

Non-government organizations. The following organizations also conduct functional literacy classes in co-ordination with the District Education Office.

Mother's Club; Nepal Women's Organization; Nepal Youth Organization; Women's Business and Professional Club; Women's Service Organization; the Community Services Co-ordination Committee which runs cottage industry training and literacy classes for poor women; and the Ratna Jyoti Pariwar carries out women's social welfare activities including adult literacy classes.

The adult literacy programme is now better known as non-formal education emphasising functional literacy. It has been realized that adult education is meant not merely to acquaint the adult with the alphabet and numerals, it has also to make him or her more functional in day-to-day life and work.

In Nepal adult education programmes have been made more participatory by associating government, voluntary, and social organizations.

Formal education

Post School Leaving Certificate (SLC) education programmes are run by Tribhuwan University and its different Institutes and Campuses located in different parts of the country and dealing with different disciplines. Pre-SLC programmes are conducted by Ministries of His Majestys Government. The Ministry of Education and Culture is conducting the following programmes in rural areas:

District Education Office (DEO). Secondary school, lower secondary school and primary school programs are looked after by DEO. The school managing committee, headmasters, school teachers and school supervisors are involved in improving the academic and administrative activities of the school.

Technical School Programme. This programme is run by (a) rural, and (b) urban technical schools, under the guidance of the Technical Education Directorate with the help of the School Managing Committee and agencies of different departments.

Equal Access to Girls Education Programme. The main aim of this programme is to popularize women's education in rural areas. It is run by lower secondary schools for three years and for one year by teachers training campuses of Institutes of Education.

Radio Education Programme. A large number of teachers are untrained in Nepal. The Institute of Education is unable to train all the teachers. The government has launched the Radio Education Programme to train the primary teacher and promote education in rural areas.

The multidisciplinary teams working at grass roots level get educational support from their respective ministries and Institutes of the Tribhuwan University. Short-term training is also organized at district level, for example, for adult education teachers, extension workers, health educators, teachers and supervisors.

Some significant programs in rural development

Education for Rural Development : Lahachok. This project was aimed at linking education with rural development and demonstrated that the local school can play the role of a change agent in the development of the community in which it stands. The findings of this project are being replicated in other remote areas of the country.

Education for Rural Development (ERD) Project in Seti Zone. This is a replication of the Lahachock project aiming at development of rural people in four hill districts of the Seti zone of Nepal.

Primary Education Project. This is a replication of the ERD in Seti project. The main programmes of this project are:

i) development of the physical facilities of rural schools (primary schools);

ii) preparing teachers for adopting child centered and activity based techniques of teaching;

iii) designing and developing a set of instructional materials to supplement the curriculum and textbooks, and

iv) devising methods of encouraging the local community to play a more active role in the learning process of their children.

Functional Education Programme and Integrated Non-formal Education. This programme is being launched in rural area with other line agencies, for example, local organizations, banks, health, agriculture and education agencies. These agencies are conducting functional literacy programmes in co-ordination with the District Education Office as well as communicating their message to the farmers or rural people for their use in development.

PAKISTAN

In Pakistan training is being imparted by different kinds of institutions (a) those belonging to the Ministry of local Government and Rural Development such as the Academies for Rural Development and the Local Government Training Institutes and Centres; (b) those existing within the school system and run by the Ministry of Education; (c) the vocational schools and training centres under agencies other than the Ministry of Education; (d) national and provincial universities; and (e) those belonging to private and voluntary bodies of which the Adult Basic Education Society (ABES) is an example. The following table shows the extent to which these institutions are geared for the training of multi-disciplinary educational groups in terms of inter/multidisciplinary orientation of their staff, their interaction with other agencies and the fields from which their trainees come.

Table 6. Present status of institutions for multidisciplinary training in Pakistan

Institutes CATEGORY	*Institutes INTERDISCIPLINARY ORIENTATION*	*EXTERNAL HELP*	*TRAINEES*
a) Run by the Ministry of Local Govt. and Rural Development	– fairly high	– occasional	– from multiple fields – same level officials being trained together
b) Run by the Ministry of Education (excluding universities)	– mostly theoretical	– occasional	– mostly the regular students enrolled for general education programmes
c) Run by other Ministries	– single discipline speciality in vocational and technical schools	– frequent (for field projects) – dependent mostly on universities	– varies from project to project
	– In agriculture and health institutes staff orientation is limited to a few closely related subjects but involvement in field projects seems to have enhanced appreciation		
d) National and provincial universities	– formal universities mostly continue the conventional approach	– external experts co-opted to the committee and course teams	
	– Open Universitys' system more geared to the interdisciplinary research approach		– varied clientele in Open University

Among past and current projects of these institutions there are few instances where the concept of a multidisciplinary team is employed in the real sense of the term. However it was as far back as 1953 that a multidisciplinary educational team under the VAID (Village Agricultural and Industrial Development) programme emerged on the rural scene for the first time. It had the support of the Local Government institutions and was composed of village level government workers of different Nation Building Departments (NBD's) who were led by a newly appointed VAID worker. The second example is that of the ongoing Integrated Rural Development Programme of Pakistan (IRDP) where the markaz level government officials of NBD's work together as a team under a project manager in a markaz office located in an area of 50 to 60 villages. A third example is provided by the Allame Iqbal Open University (AIOU) where (a) the academic staff drawn from different disciplines of the AIOU, (b) experts from the NBD's, (c) relevant officials and workers from the field, (d) representatives of learners from the village area and (e) media experts, form a team. They are able to reach each village through cassettes and flipcharts. Professional advice of experts plus the views of local village functionaries are

recorded in cassettes and played to the groups of learners with the help of flipcharts. The casesette becomes the teacher and a group leader who is also a learner simply does as the cassette says.

As regards the level of interaction between team numbers in each of the three programs the VAID team visited together in each village. They had frequent contact but the interaction among them was reported to be low. In comparison to this the markaz level officials under the IRDP who are stationed in the same building have frequent joint meetings whereas their lower field staff mostly work individually in the villages. At the AIOU at the course development stage course team meetings are frequent. These course teams are the groups who work together on the design and development of a learning package and as such interaction among them at the course development stage, at least, remains high.

As regards interaction between the team and the community itself it is a fact that under the VAID programmes villages asked few questions and most discussion was between the inter-departmental staff. Similarly in the IRDP on the visits of high officials when markaz staff were also present discussions mostly remained preconducted and formal. In the case of the AIOU project efforts are made to develop learning packages in such a way that the learners get actively involved. There being no teacher the learners tend to learn from each other and discussions are more open. Interestingly an occasional but a planned visit of an expert or even a local worker to a village after the people have heard him on cassettes not only raises a feeling of respect for him in the community but he is warmly received and he comes prepared with a sense of pride. Members of the team are not physically present but they can be heard and reheard.

In the working of multidisciplinary teams perhaps the problem of co-ordination has been the most crucial. Under the VAID and the IRDP the co-ordination work at district level was done by the Deputy Commissioner. At village level the village worker co-ordinated the team. The development officer of VAID worked as secretary to the committee which worked under the chairmanship of the Deputy Commissioner and comprised all the departmental heads. At district level the same is true of the IRDP. But a co-ordination problem arose because of administrative controls. Village level workers of each government agency remained accountable to their own officials at district handquarters. In the IRDP although a project manager was placed in charge of the markaz level officials of other departments the latter still continued to be accountable to their own departmental heads at tehsil or district headquarters. At the AIOU the problem of co-ordination and co-operation seems to be solved by (a) holding meetings where high and low level officials of NBD's both attend; (b) by inviting requests from these departments for the development of learning packages that relate to their own extension programmes, (c) by signing detailed project agreements with the departments; (d) by requesting nominations of suitable persons to work in these teams; (e) by paying fees to the team members; (f) by designing learning packages to serve as aids in the performance of their duties by departmental staff, and (g) by providing an extra incentive to the members by projecting them through radio, TV and cassettes.

In the VAID programme, separate training institutions were set up to train the VAID workers. They were trained along with workers of other departments. Impressive training manuals were also prepared. The contents of these manuals even in those days turned out to be fairly interdisciplinary in nature. In the IRDP project managers and local government officials are trained together with the same level officials of other departments. This training occurs in the provincial academies and the National Academy for Rural Development at Peshawar. At the AIOU long joint working sessions and active involvement in programme delivery provides an opportunity to learn by doing. In the field a "train the trainers" approach is followed. Supervisors train assistant supervisors who in turn train the group leaders. Most of the time the same methods are used as are used for the final learners in the community, that is, cassettes and flipcharts and associated discussion.

Regarding *research and feedback,* both VAID and IRDP had strong project support when they were started. However the feedback was mostly verbal and accidental. It was often on the basis of personal impressions gathered by officials at the time of surprise or other visits. On other occasions it was reflected through people's verbal complaints. In the AIOU project continuous action research is carried out in selected test-bad areas. During each cycle of the course feedback is received from the groups. This is gathered on specially designed forms filed by the group leaders and supervisors.

Cost comparison for the maintenance of the three kinds of teams reveals that staff costs at the rate of one VAID worker per group of 7 to 8 villages plus equipment costs were comparitively high. Similarly at markaz level high costs were involved for provision and maintenance of multi-purpose service facilities in the IRDP. For the AIOU project initial costs on research and pilot studies are high. Resource multiplication on the other hand is easy and with increasing numbers of learners participating in these courses fixed costs get thinly distributed and the per learner cost goes down. The pooling of Nation Building Departments' resources is made possible in the AIOU programme.

As far as the replication or expansion of these projects is concerned whereas it is limited by resource constraints in the first two approaches the distance teaching methodology makes expansion easy while still maintaining central control.

VAID multidisciplinary team experience was the beginning of a new trend of attacking rural problems in a multidisciplinary way but the problems concerning interdepartmental rivalries and sharing of credit for work were a major drawback. With the Open University project, although distance teaching methodology has its own limitations the problem of co-ordination appears to be less acute. It is partly because the university itself serves as a neutral co-ordinating base for other agencies.

PHILIPPINES

Non-formal education programmes utilizing multidisciplinary teams are the focus of this paper. Experience related here has been drawn from the national Self Reliant Home Movement (SRHM) programme implemented at the local level by non-formal education personnel.

SRHM aims to develop self-reliant households and communities. It includes training in technologies associated with the kitchen garden, household improvement, health, mechanics, energy and recycling. Integretion of literacy development into the learning of these technologies is a supplementary goal.

SRHM strategies arose from the National Multidisciplinary Operational Seminar on the Educational Components of Rural Development in 1983. The seminar established a strategy for multidisciplinary involvement of various sectors with an emphasis on village leaders planning the projects. The seminar recommended an approach based on real-life situations with a thorough study of the community, its environment, and its peoples' needs, values and priorities as a starting point.

Existing arrangements and relationships. In the planning of the programme at the local level experts from the relevant government agencies are asked to participate. The plan becomes a co-operative undertaking. Since plans for the improvement of the community are based on real-life problems participation of village leaders and representatives is necessary.

A wide spectrum of people participate in the SRHM implementers' training workshops in the 13 regions of the country. Other government agencies comprise 13 per cent of participants, school or other school personnel 57 per cent, community leaders 12 per cent, youth leaders 3 per cent; others including non-government voluntary organizations (sometimes media people) 15 per cent. Local plans are developed in the workshops.

The arrangement is that the plan for the programme is done by the wide representation of the agencies working at the local level.

The non-formal educators and community members are thus trained to identify needs and problems presented through the help of this multidisciplinary group. They are involved in action research.

Existing structures. There are structures in and outside the government sector that help in the training programmes. They can be classified as permanent or *ad hoc* organizations, school based or non-school based. In the case of SRHM these structures include (a) parent-teacher organizations; schools and universities; regional, municipal or village councils; local offices of government ministries; banks and lending institutions that give out short term loans.

Innovative training strategies. Training programmes in the SRHM take a multidisciplinary approach where the participants are representatives from the village, like captains and leaders, and from the different organizations and government entities involved in agriculture (MAF), social work (MSSD), local government (MLG), youth (NMYC) and non-formal education.

The strategy is based on team work where village representatives identify their own needs, priorities and problems in the light of the seven technologies for self-reliant homes and communities The result is a plan which integrates the seven technologies and wherever feasible, literacy development.

Training methods include demonstrations, sometimes by farmers or participants, and field visits to projects.

After the training at the regional and divisional level are "echo" training programmes at the school level.

Evaluation consists of (a) comparison between the plan and the rural development projects specified in the plan, and (b) the number of households implementing the technologies. The focus is community and household improvement. Usually, model households and model communities are established for demonstration purposes.

An innovative aspect of the strategy is participatory planning by the village council and representatives of the different agencies. An analysis of the environment, resources, needs, problems and priorities precedes planning.

Another feature is the integrated training of village leaders (some of whom are semi-literate) by educational personnel and representatives of the different agencies involved in the planning of the projects. It has been found that social workers and health workers have valuable insights into means by which community participation can be motivated and sustained.

The role played by training and professional support structures. In the SRHM programme three types of structures are identified, each performing roles in the programmes:

i) *education* – usually composed of non-formal education personnal who act as accreditors, initiators and convenors of the programme and who also conduct research into feasible and desirable strategies for responding to the problems of the community;

ii) *agency field workers* – act as communicators and experts within their own discipline and provide expertise for others in the team; and

iii) *village members or leaders* – problem identifiers and problem solvers who are open to suggestions from other team members.

These three groups form a team which (a) identifies a community problem; (b) develops a plan to solve it; (c) implements the plan; and (d) evaluates the results.

REPUBLIC OF KOREA

In the Republic of Korea, there are many agencies in which multi-disciplinary project teams undertake programmes of rural development. The relationships among educational groups and representatives of different development agencies are varied.

Under the supervision of the Ministry of Education, various types and levels of schools such as kindergarten, elementary, secondary and vocational schools, and junior colleges take charge of educating not only rural people but also prospective

and present farmers. These educational institutions have close relationships with people in rural communities. Vocational agricultural high school teachers in particular, have close relationships with other educational groups such as extension workers, agricultural co-operative workers, voluntary village leaders, and rural youth.

Under the Ministry of Agriculture and Fishery, the Rural Development Administration has agricultural extension workers and rural guidance workers for rural life improvements. They diffuse new agricultural information and provide technical training to future farmers, leading farmers, farm machinery technicians and rural housewives. Extension workers have close relationships with county or subcounty public officials, vocational agricultural teachers under the regulation of the Council of Agricultural Co-operation, and other groups such as agricultural co-operative workers, voluntary village leaders and religious groups.

Under the Ministry of Home Affairs, county or subcounty public officials and Saemaul leaders support farmers and rural people in terms of agricultural administration. They also have close relationships with extension workers, agricultural co-operative workers, and village voluntary leaders.

Under the Ministry of Health and Social Welfare, family planning workers, health and nutrition educators, and other social workers are working for rural people. They have close relationships with county or subcounty public officials, extension workers, teachers and village leaders.

Under the Ministry of Labour Affairs, vocational training teachers teach rural youth and adults. They also have relationships with vocational high school teachers and extension workers.

There are also many private educational agents and groups such as leaders of religious groups, teachers at private farmer training institutes and village voluntary leaders. They participate in multi-disciplinary education team in rural areas. They also have close relationships with other educational institutions.

Training systems for multidisciplinary educational teams vary depending on their roles and functions. For example, preservice and in-service education for teachers who are teaching at kindergarten, elementary, secondary and vocational high schools are offered at teachers colleges or colleges of education, and sometimes by research institutes and related industries.

Pre-service education for other multidisciplinary educational groups may be high school, junior college, college or university. However, in-service education for them varies according to purpose, programme, period and clientele. There are actually 22 different in-service training institutes for multi-disciplinary educational teams. If the multi-disciplinary teams wants to understand the concept of the Saemaul Movement, they should be trained at a Saemaul Leader Training Institute. if the extension workers want to get recent agricultural knowledge and technology, they can take one of 37 different in-service training programmes offered at the Agricultural Official Training Institute under the Ministry of Agriculture and Fishery.

More detailed samples of pre-service and in-service education for multi-disciplinary education teams are as follows:

1. *A sample of pre-service education, Department of Agricultural and Extension Education, College of Agriculture, Seoul National University.* The Department is geared to provide occupational centered teacher training for agricultural high schools and to provide well trained extension workers for the Rural Development Administration and similar organizations working in rural development. The emphasis is on a joint major between behavioural sciences, pedagogical courses and applied fields of agronomy, forestry, animal science, sericulture, food technology, agricultural engineering and agricultural economics. Instruction for prospective agriculture teachers is practical, putting emphasis on 'know how' rather than 'know why'. Laboratory experiences and field work with constant interplay between general principles and practical application are emphasized. Enrolment of students each year will be less than 30 for the forseeable future because the demand for agriculture teachers in the future is estimated at 2 or 3 per cent of the total number of agriculture teachers and about 30 graduates each year will meet the demand. Thirty students are also recruited each year for the extension education major and the Department aims to educate the core leaders in this field.

In-service training programmes being conducted by the Department are to be continued for upgrading the competencies of agriculture teachers. Approximately 2,300 teachers have participated in the programme and it has been evaluated the best programme of it's kind by the Ministry of Education. The programme of six weeks in the summer vacation does not interrupt the agricultural high school programme or the college programme.

2. *A sample of in-service education at the Agricultural Officials Training Institute.* One of the major goals in the agricultural sector is to increase agricultural production and accelerate the foundation of food self-sufficiency through maximum utilization of available resources. To achieve this goal the Agricultural Officials Training Institute has been carrying out in-service training courses for newly recruited Ministry of Agriculture and Fishery and Rural Development Administration employees and other relevant groups.

The training programmes are designed on the training principle guidelines prepared by the Ministry of Government Administration.

Training in each course is based on the results of a personal survey that considers the Institute's training capabilities and client's training needs. The curriculum for each course is designed in consultation with ex-trainees and the organizations concerned.

Based on these procedures, the institute offers 37 different types of programme.

THAILAND

In Thailand, rural development has been a major thrust of every National Economic and Social Development Plan since 1961. An infrastructure of roads,

irrigation works, communication systems, schools and health centres is an obvious result.

Segmented and poorly co-ordinated development is evident in many situation, however, and the need for an integrated pattern of development is widely accepted. The implication for training and education programs for rural development is that they must be interdisciplinary in nature and based on integrated co-operation.

The ministries charged with the responsibility for implementing rural development policy are the ministries of Health, Interior, Agriculture and Education. Although not directly responsible the universities have an important role to play and are expected to support development activity.

Villages are the prime target for rural development and the operational agents are the development worker, health worker and agricultural extension worker. The educational agencies – college, university, school and research centre are expected to play a supporting role through their research and experimentation activity.

Pre and in-service training to develop an interdisciplinary approach. Experience in rural development situations complemented by knowledge of new technology is the guideline for training of development personnel.

In the Northeastern region of Thailand training projects based on co-operation between teachers colleges and the local university are a feature. Three examples ares the:

a) co-operative project between the Northeastern Teachers Colleges Consortium and Khon Kaen University;

b) co-operative project between teachers colleges and the Educational Office, Region IX; and

c) community-based In-service Teachers Training Project.

The Co-operative Project Between the Northeastern Teachers Colleges Consortium and Khon Kaen University. There are eight teachers colleges in the Northeastern region. The region comprises approximately one third of the country's population and area. Since 1975, the eight teachers' colleges have formed themselves into a consortium and implemented many projects in relation to rural development. In this region, there is only one regional university, Khon Kaen University. The University has faculties in most academic fields. Both the teachers colleges consortium and the university share the goal of regional development, particularly in terms of development of education for regional development. Since 1978, co-operative projects have been undertaken by the two institutions in six programmes areas:

i) promoting rural development according to national target groups;

ii) co-operative research and transferring of technology to rural areas;

iii) in-service training of local personnel;

iv) promoting local culture for rural development;

v) community service through mass-media and special activities;

vi) temporary exchange of academic staff between institutions.

Teachers colleges act as mediators to co-ordinate the work at village level. In other words, the university transfers new technology to rural areas by having teachers colleges as extension stations. Teachers colleges have many on-going projects operated co-operatively with rural workers and are an operational base.

Training by means of an inter-disciplinary approach is created by personnel of the three concerned agencies working together, that is, university, teachers college and development agencies.

Co-operative project between teachers colleges and the Office of Education Region IX. Thailand is divided into 12 educational regions. Each Regional Office of Education (comprising 5-7 provinces) takes responsibility for and supports every level of education. Many rural development projects are conducted on a co-operative basis by the Regional Office of Education and teachers colleges in the region.

In the case of Education Region IX there are three teacher colleges and since 1975, the Regional Office and the colleges have been involved in a project of curriculum development aimed at modelling curricula for hygiene, home-economics and vocations for rural development.

This project is interdisciplinary. At the planning and supporting level, the Office of Educational Region IX co-ordinates the involvement of Central Administration and the Departments of Educational Technique, General Education and Teacher Education. The office, besides co-ordinating, seeks the co-operation of local educational institutes, for example, teachers college, college of agriculture, community development office, health office and polytechnic school. At the village level, the office collects data on local needs. This means that teachers, provincial supervisors and teachers from experimental schools are provided with opportunities to attend workshops where information and news are disseminated.

The teachers' colleges play a key role in the implementation stage of the project by enabling their staff to participate in the experimentation with the curriculum. The outcome for the teachers colleges is a curriculum suitable for the pre-service and in-service training of teachers in classroom training and in field-work in rural schools.

The outcome for the schools are development activities such as fish raising and vegetable gardening at school and in the students' homes. Other development workers support these activities. It is thus evident that operation is integrated and interdisciplinary.

The community-based in-service teachers programme. In 1977, the Northeastern Teachers Colleges Consortium launched a training project, using the award of a certificate as a basic motivation, called the Community-Based In-Service Teachers Programme (CBITP). This training is conducted in both the teachers college campus and the rural school and is aimed at improving teachers' effectiveness.

At present, almost all rural teachers are connected to the CBITP programme. Included also are personnel from other developmental agencies, such as rural development workers, rural health workers, agricultural extension workers and even policemen.

Trainers are mostly teachers colleges instructors and they have the opportunity to familiarise themselves with genuine rural situations. Local personnel of development agencies also act as trainers.

Some outcomes. Conclusions reached and pointers for future activities that have emerged from experience with the projects reported and others with a similar orientation include:

Action research. Research is needed to identify rural problems and to develop appropriate methodologies for tackling them. Research and study are the main stream of academic activity at university and college level and it is important that it be directed to these ends. This will involve the use of "qualitative" and "anthropological" methods as well as the more conventional quantitative ones. Case studies to assess the factors that contributed to successful development projects are also needed. Research, experimentation and development go hand-in-hand and action research is the means by which development agencies can be involved in a co-operative and efficient process of collecting data, trying alternative approaches and building the strength and confidence of local agents. Unless the research is based on real situations the direct employment of outside technology and knowledge tends to widen the gap between theory and practice.

Networking. Networking of institutions has been recognized as a means of promoting effective use of resources. Formal structures have been established to facilitate networking in Northeast Thailand between Koen Khaen University, the consortium of teachers colleges, clusters of schools and development agencies.

Action research involving the various structures is a way of taking advantage of the opportunities for interdisciplinary activity the structures provide. Because research is the province of universities and colleges they are well placed to play a central role in initiating co-operative research activity and hence, networking.

Training. The network structure involves four groups – university, teachers colleges, schools and development agencies. The school teachers come to colleges for training and college staff go to extension centres. As a result of this interaction the effectiveness of training is rising. At the same time university academics are interacting with college staff and development agencies and their influence is having a positive influence on staff of colleges and development agencies, and indirectly, village people.

LIST OF SELECTED APEID PUBLICATIONS
RELATING TO EDUCATION AND WORK

* *Report of work plans of APEID for the second programming cycle. 1978-1981. 1977.*

* *Work and learning; final report. 1978.*

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* *Development of productive skills; report. 1979.*

Inventory of Educational Innovations in Asia and Oceania, EIA Nos. 96-109. 1979. (on vocational and technical education)

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* *Developing instructional materials for productive skills; report. 1980.*

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* *Integrating subject areas in primary education curriculum – a joint innovative project; report. 1982.*

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New trends in technical teachers training; final report. 1983.

Work as integral part of general education: synthesis of experiences – India, Indonesia, Philippines, Thailand, Viet Nam. 1985.

Training of educational personnel focused on girls and women. 1985.

Interface between education and state policy: Redesigning teacher education policies in the context of a preferable future – Republic of Korea. 1985

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* Out of stock

The Asian and Pacific Programme of Educational Innovation for Development (APEID) [illegible] the Member States.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through over one hundred national centres which they have associated for this purpose with APEID.

The 24 Member States participating in APEID are [illegible], Bangladesh, China, [illegible], India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Maldives, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, [illegible], Socialist Republic of Viet Nam, Sri Lanka, Thailand, Tonga and Turkey.

Each country has set up a National Development Group (NDG) to identify and support educational innovations for development within the country and facilitate exchange between countries.

The Asian Centre of Educational Innovation for Development (ACEID), an integral part of the Unesco Regional Office for Education in Asia and the Pacific in Bangkok, co-ordinates the activities under APEID and assists the Associated Centres (AC) in carrying them out.

The programme areas under which the APEID activities are organized during the third cycle (1982-1986) are:

1. Universalization of education: access to education at first level by both formal and non-formal means;
2. Education for promotion of scientific and technological competence and creativity;
3. Education and work;
4. Education and rural development;
5. Educational technology with stress on mass media and low-cost instructional materials;
6. Professional support services and training of educational personnel;
7. Co-operative studies and innovative projects of research and research-based experimentation related to educational development.